

California Department of Forestry and Fire Protection

San Diego Unit

2022 Strategic Fire Plan



Unit Chief Tony Mecham

Integrity Competency Accountability Customer Service Safety Leadership

UNIT STRATEGIC FIRE PLAN AMENDMENTS

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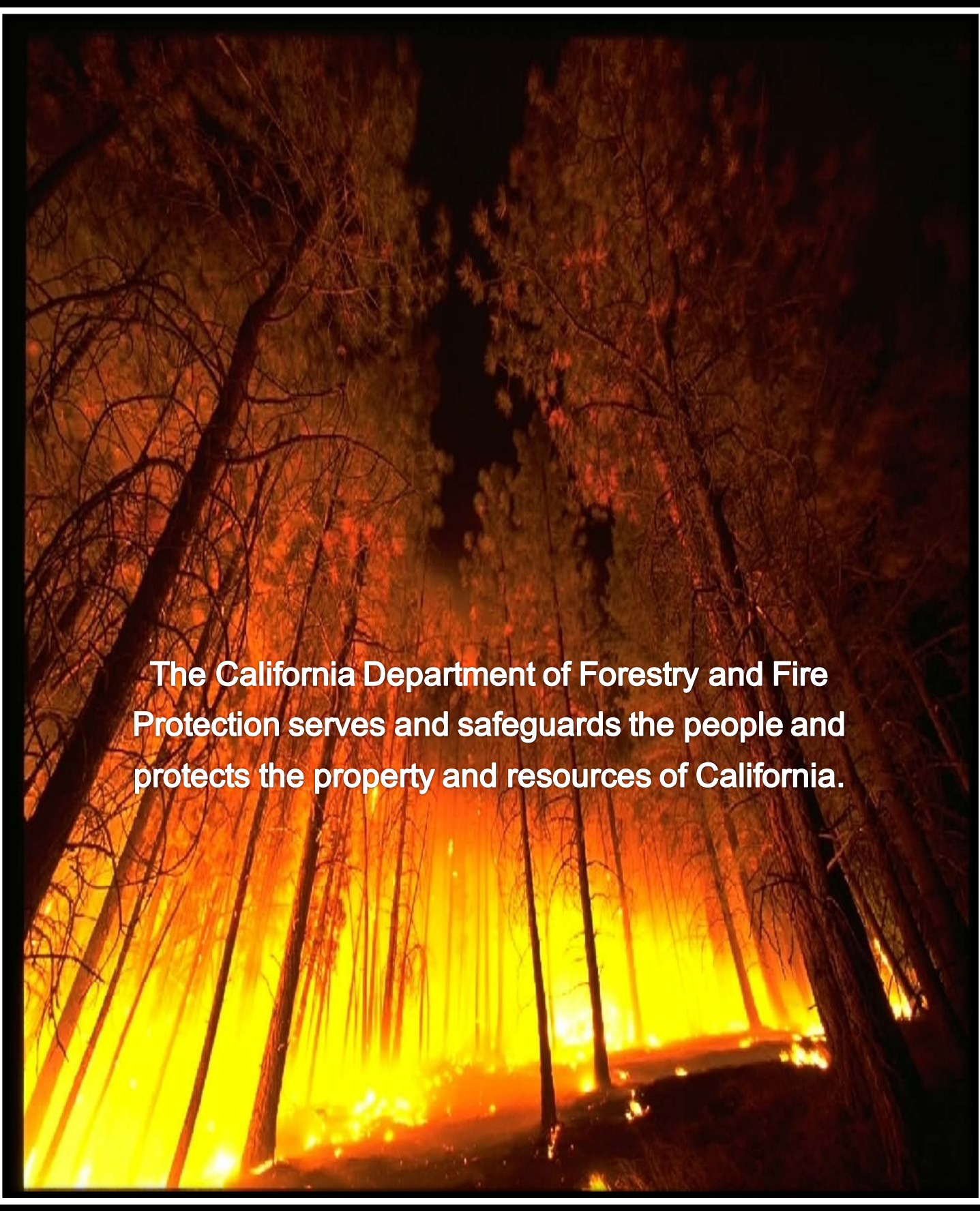
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The California Department of Forestry and Fire Protection serves and safeguards the people and protects the property and resources of California.

SAN DIEGO UNIT STRATEGIC FIRE PLAN

- Was developed under the guidance of the San Diego Unit Core Planning Group with support of the Units Battalions and Programs.
- Consults with Federal, State, County and Local agencies and stakeholders identified throughout the plan.
- Identifies and prioritizes pre and post fire management strategies and tactics in an effort to reduce the loss of values at risk to the San Diego Unit.
- Is intended for use as a planning and assessment tool only. It is the responsibility of those implementing the projects to ensure that environmental compliance and permitting processes are complete.

SIGNATURES:

DocuSigned by:
Tony Mecham
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Tony Mecham
Unit Chief

5/26/2022

Date

DocuSigned by:
Eric Just
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Eric Just
Division Chief, Prefire

5/26/2022

Date

DocuSigned by:
Josh Black
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Josh Black
Captain, Prefire

5/26/2022

Date



Executive Summary



The need for wildfire planning is no more evident than the devastating footprint from the 2003, 2007 and 2014 Fire Sieges in San Diego County. These fire sieges left major lingering impacts that could last for decades. Over half a million acres were burned, twenty-five lives were lost, many more people were injured, and thousands of homes and other structures were damaged or destroyed. The loss of personal property and keepsakes were un-measurable, business and traffic were significantly disrupted, historic and prehistoric cultural resources were damaged, carbon was added to the atmosphere, air and water quality was impacted for months, possibly years, wildlife habitat was altered, and forest succession was significantly setback at least 100 years. These fires not only affected San Diego, but California and the rest of the United States as well, as the cost to taxpayers reached into the billions of dollars for fire suppression. Pre and post wildfire planning is paramount to minimize, and possibly, avoid these devastating impacts in the future.

The San Diego Unit 2022 Strategic Fire Plan (Plan) represents a local wildfire planning document that tiers under the California Strategic Fire Plan (Strategic Fire Plan). Directed by the Public Resources Code 4114-4130, the Strategic Fire Plan was developed in partnership with the California Board of Forestry and Fire Protection (Board) and the California Department of Forestry and Fire Protection (CAL FIRE). The statewide plan outlines seven broad goals and fifty-seven objectives with the vision to create “a natural environment that is more resilient and man-made assets which are more resistant to the occurrence and effects of wildland fire through local, state, federal and private partnerships.” CAL FIRE Administrative Units and Contract Counties are required to develop work plans to implement the Strategic Fire Plan. Essentially, the San Diego Unit Fire Plan is the work plan on how the San Diego Unit will implement and meet the goals and objectives identified in the Strategic Fire Plan through the implementation of Battalion-based Work Plans.

The development strategies of this Plan are to create a county that is more resistant and resilient to the damaging effects of catastrophic wildfire, while recognizing fire’s beneficial aspects. This Plan utilizes the following strategies to accomplish its goals:

- Collaborate with stakeholders and multiple fire jurisdiction
- Conduct and refine risk assessments for Wildland Urban Interface (WUI) areas
- Promote an increasing level of compliance with defensible space laws and regulations
- Monitor the effectiveness of programs, projects, and initial attack success
- Implement and maintain effective fuel reduction projects to improve public safety and reduce impacts
- Efficient fire prevention and loss reduction education by providing training and information to the media, public, and stakeholders

This Plan, with the cooperation of key stakeholders, has been developed with the purpose of meeting the goals set by community stakeholders and the California Fire Plan while integrating a community input focused approach. This Plan prioritizes protection of communities, natural resources, and the lives of the public and firefighters. This priority is shared among state and local governments, and other community stakeholders. Collaboration, priority setting, and accountability provide the framework for the guiding tactical principles of this Plan, which include:

- Utilize fire prevention efforts to reduce ignitions within the Unit
- Support the implementation and maintenance of defensible space around structures
- Continue to provide operational training that will support safe and successful suppression operations
- Promote efforts to restore the ecological role of prescribed fire
- Increase administrative and cooperative capacity to achieve fuels reduction work on the landscape

This Plan provides planning information at a county-wide scale and recognizes the variation in fuels, weather, topography, and community/agency priorities present in the county. It is intended to be a dynamic planning tool for promoting wildfire protection efforts in the county while recognizing that localized planning efforts being carried out at the City or Community level shall have priority and authority over the county-level recommendations included in this Plan. Additionally, this Plan is not intended to satisfy the California Environmental Quality Act (CEQA) or regulatory permitting requirements. Any recommended projects or actions contained herein shall be subject to the appropriate permitting and environmental review for the jurisdiction in which they are proposed.

SECTION I - UNIT OVERVIEW

UNIT GOALS

Integrating local planning with statewide planning is fundamental to determining the Unit's goals and objectives. After the devastating fires, several fire planning actions and activities were identified and are now in progress to minimize impacts, shall another major wildfire occur. Coordinated interagency training has facilitated better trained paid and reserve firefighters. Coordination between local, county and federal fire agencies has improved. The goal of San Diego County Fire Protection District Community Risk Reduction Program in cooperation with CALFIRE, is working to enhance community resilience by anticipating and preparing for catastrophic emergencies and maximizing opportunities to lessen the impacts through education, engineering and enforcement. Ignition resistance building standards have been adopted by the County and fire prevention education has increased public awareness of the dangers from wildland fire. Moreover, in partnership with San Diego County, defensible space inspections have increased. The county abatement program enforces the defensible space law when a property owner fails to comply. These are just a few examples of the key changes that were implemented.

At the statewide level, wildland fire planning is more than just a focus on treating hazardous fuels; it is about the whole system of wildland fire planning and thinking about where and how people live and co-exist within wildfire prone environments. The Strategic Fire Plan looks at wildland fire planning from an integrated approach by focusing on stakeholders, assets at risk, governmental services and jurisdiction, as well as both the fire prevention and suppression efforts. The integrated concepts framing the goals of the Strategic Fire Plan are:

- Identify and evaluate wildland fire hazards and recognize life, property, and natural resource assets at risk
- Articulate and promote the concept of land use planning as it relates to fire risk
- Develop shared vision and planning at the local/community level
- Improve fire resistance and survivability for the "assets at risk" – such as homes and neighborhoods
- Develop methods to integrate fire and fuels management practices with landowner priorities
- Determine the appropriate level of fire protection resources and related services required
- Provide for post fire recovery
- Each goal is intended to build upon the previous one, yet can be implemented simultaneously or independently

In terms of initiating projects and activities, the pre-work begins at the Battalion levels. Field Battalions are the key "work unit" for coordinating and working closely with property owners, community groups, fire safe councils, and other agencies. Through this coordination process, projects and activities are identified that best serve the needs of the public for wildland fire protection. Essentially, the public and stakeholders are involved at the grassroots level. Once a project has been vetted through this process, then Battalion Chiefs propose the project to the Unit. Pre-Fire/Resource Management staff assists in the planning and layout for the projects that are related to fuels treatment. Battalions typically focus on proposing fuels treatment projects in or near community areas that facilitate community protection. Environmental review is completed on all fuel treatment projects through the Department's existing Vegetation Management Program or through the departmental guidelines which comply with California Environmental Quality Act.

The methods for assessing vulnerable communities incorporate both wildfire risk and socioeconomic conditions of the communities that fuel reduction projects are designed to reduce. In general, proposed projects ranking is based on the following framework:

- Assessment of wildfire risk to the public within the proposed project area
- Ingress and egress status
- Evaluation of the socioeconomic characteristics of communities that projects are intended to protect

Despite recent accelerated investment and resources, the vast amount of work and time required to achieve strategic goals necessitates an approach that best protects lives and property in the near-term, while simultaneously working over the long-term. This will create more resilient communities and landscapes and will allow the public to live sustainably in San Diego County's fire-prone landscapes. Near-term needs include increasing the pace of fuel reduction in and near communities at risk, improving compliance with defensible space requirements, and improving fire resistance of both existing and new structures in the WUI. In the longer term, a landscape-scale approach that marries fuels treatments with targeted community protection activities will be needed to fully address the scope of fire management issues in the county.

UNIT DESCRIPTION

Located in the Southern Region for the California Department of Forestry and Fire Protection, the San Diego Unit (Unit) encompasses both San Diego and Imperial Counties. Bordered by Mexico to the south, the Pacific Ocean to the west, Riverside and Orange Counties to the north and the state of Arizona to the east, the San Diego Unit covers over 5.5 million acres.



FIRE PROTECTION RESPONSIBILITIES

The San Diego Unit is responsible for 1.2 million acres of State Responsibility Area (SRA) for wildland fire protection, while federal agencies are responsible for 784,751 acres of Federal Responsibility Area (FRA), and local agencies are responsible for 754,622 acres of Local Responsibility Area (LRA). In terms of coordinated wildland fire protection services (exchanging acres) the Unit has fire suppression responsibility for 1.4 million acres of State Direct Protection Area (State-DPA), while the federal agencies have responsibilities to protect 552,903 acres of Federal Direct Protection Area (Federal-DPA).

Imperial County is included in the San Diego Unit boundary; however, the few private land holdings are surrounded by BLM lands and account for close to 15,000 acres. While relatively small, this area is also mapped as State-DPA.

POPULATION, WILDLAND URBAN INTERFACE AND OWNERSHIP

San Diego, a world class tourist destination, is a mixture of cosmopolitan/urban/rural development within the proximity of a wildfire prone environment. While Imperial County, dominated with commercial agriculture operations and supported by the Colorado River and All-American Canal, renewable energy, solar, and geothermal energy, in a desert region that rarely experiences wildland fires. The boundary between San Diego County and Imperial County is a transitional area of sparse chaparral and desert vegetation that occasionally supports wildfires. Moreover, the San Diego County and Imperial County regions are the third most populated areas in California, and nearly every resident in San Diego County, and portions of Imperial County, has been directly or indirectly impacted by wildfires.

Although the population of San Diego County and Imperial County exceeds 3.3 million, most of the population lives in San Diego County and resides in metropolitan areas within 20 miles of the coastline. Whereas the population that lives in Imperial County resides primarily in small towns and agriculture communities. Nevertheless, nearly a half a million people reside in upwards of 170,000 housing units in the rural or “backcountry” communities, which are identified SRA. Nearly all of these households are in San Diego County and are considered a part of the Wildland Urban Interface (WUI).

Public agencies own over 1.6 million acres in San Diego County and Imperial County. Nearly one-third of the area in the Unit is held as public lands (city, county, state or federal governments). See the table below for public lands within the San Diego Unit.

SAN DIEGO UNIT: SAN DIEGO AND IMPERIAL COUNTIES - PUBLIC LANDS - ESTIMATED ACRES - 1,510,179 ACRES							
FEDERAL	ACRES	STATE	ACRES	COUNTY	ACRES	CITY	ACRES
Military: Pendleton, MCB, Miramar Airbase, MCB and other facilities	158,306	State Parks: Palomar, Anza-Borrego, Cuyamaca Rancho, and others	577,890	San Diego County Park & Recreation	44,000	San Diego City Parks Dept.	39,000
USFS, Cleveland NF: Descanso and Palomar Districts	291,662						
US Fish and Wildlife Service	12,708	Dept. of Fish & Wildlife: Hollenbeck Canyon, Rancho Jamul, San Felipe Valley	47,619	Imperial County Park & Recreation	10,000 (est.)	Cities Parks Imperial Co.	10,000 (est.)
Bureau of Land Management	186,279						
Tribal Lands	132,715						
Federal Totals	781,670	State Totals	625,509	County Totals	54,000	City Totals	49,000

INTERNATIONAL BORDER INTERFACE

The United States-Mexico border creates another type of wildland fire interface. This type of interface results from undocumented, international travelers from Mexico entering the United States through dense, dry brush conditions. Occasionally, these international travelers set cooking, warming, or warning fires that spread into wildlands. In the mid-1990s, several “Border Fires” injured or claimed the lives of many international travelers. An international council was formed, now known as the Border Agency Fire Council, to provide fire safety information to international travelers, guide firefighting operations, and ensure fire fighter safety along the border.

WEATHER

Like most of southern California, the San Diego Unit is located in a Mediterranean Climate; warm to hot dry summers and mild to cool winters. Summer temperatures hover around the mid to upper ninety degrees for the center region and to the low one-hundred-degree temperatures in the desert regions. During most of the summer period, fog moderates the coastal temperatures, and occasional significant hot dry spells similar to desert conditions may occur near the coastline and mountainous areas. While snow is common at elevations above 3,500 feet during cold winter storms. Rainfall averages range from 12-15 inches at the lowest elevations near the coast, to over 35 inches at the highest elevations. The dry desert region commonly receives less than 4 inches of rainfall each year. Santa Ana Winds are one of the more notable weather conditions for southern California. These winds can blow any time of the year, however, these strong dry winds typically coincide with the drier period as well, which is late summer and fall periods (September through November). These winds, which can easily exceed 60 mph, are warm and dry and can severely exacerbate brush or forest fires, especially under drought conditions.

TOPOGRAPHY

Topographically, San Diego County is boxed by the Pacific Ocean in the west, the Palomar and the Santa Rosa Mountains to the north, the Cuyamaca and Laguna Mountains to the east, and the Mexico border to the south. Imperial County lies directly east of San Diego County and is framed by the Cuyamaca and Laguna Mountains in the west, the Santa Rosa Mountains and the Salton Sea and Colorado Desert to the north, the Colorado River and the state of Arizona to the east, and the Mexico border to the south. Generally, the elevation rises from sea level to nearly 6,600 feet in elevation. In the eastern center region, the terrain can be described as coastal areas, inland canyons, mesas, valleys, and mountains. In the far eastern section, the terrain is described as desert. Several canyons in San Diego are aligned in an east-west orientation, and this orientation funnels Santa Ana winds from the desert region to the coast areas.

VEGETATION / FUELS

The native vegetation complexes approximately follow the topographic transitions: coastal sage scrub/soft chaparral on the coast transitions to hard chaparral species in the inland canyon, mesas, and upper desert regions, which transitions to oak woodlands and mix-conifer forest at the higher elevations, and eventually descends into desert plants communities. Nearly all of these vegetation types are fire adaptive plants. In general, the coastal sage scrub and mixed chaparral dominant most of San Diego County's natural landscape; at least 70% of the natural landscape can be described as a chaparral type of vegetation, with most types located below the 5,000-foot elevation level.

Although conifer forest occupies less than 5% the area in San Diego County, these limited resources are primarily found above 4,500 feet in elevation in the Palomar, Santa Rosa, Cuyamaca, and the Laguna Mountains. Conifer forests are under pressure from development, insects, diseases, and wildfires throughout most of California, including San Diego County as well. In early 2000s, the combination of drought, overstocked forest conditions, and a major bark beetles outbreak caused extensive tree mortality in San Diego, Riverside and San Bernardino Counties. Due to the significant tree mortality, Governor Schwarzenegger declared a State of Emergency to address the extreme risk to people, property, and the environment. The proclamation enabled landowners and public agencies to take steps towards removing dead trees and associated hazardous dead vegetation. However, in October 2003, the Cedar Fire burned a significant portion of forested lands in the Cuyamaca Mountains. Cuyamaca Rancho State Park lost nearly 95% (20,000 acres) of the forest to the Cedar Fire. More notably, after the fire there was very little natural regeneration of the forest. In October 2007, Cuyamaca Rancho State Park launched a partnership project, with the CAL FIRE-San Diego Unit, called the Cuyamaca Rancho State Park Reforestation Project. Its purpose was to restore and reforest the intensely damaged conifer forest. This reforestation project is in the verification stage of being registered with the California Climate Action Registry. It is the first reforestation project to register public lands in California. To review the project, go to <http://www.climateregistry.org/> and search for project name: Cuyamaca Rancho State Park (CRSP) Reforestation Project or project identification: CAR505.

Oak woodlands occupy about 10% of the natural landscape in San Diego County. Like coniferous forest, these resources are under pressures from development, insect and disease process, and wildfire as well. In the Pine Valley-Descanso area of San Diego, perhaps as early as the late 1990s, red oak species were dying for unknown reasons. In 2008, the Goldspotted Oak Borer (GSOB) was identified as the likely pest causing oak mortality. Currently, this pest has spread beyond the Pine Valley-Descanso area and is now associated with causing significant oak tree mortality among mature oak trees throughout San Diego County. There are two types of concerns with this pest. The first concern is ecological impacts to the red oaks species, not only in San Diego, but for the rest of the California as well. The other matter of concern is that when wildland fire moves through areas with high oak tree mortality, especially in community areas, these dead tree trees increase the dead fuel load and increases the falling hazard risk to firefighters and the public. To address the concerns about GSOB, a steering committee, an educational-outreach-science committee, and lead scientists/researchers have organized to minimize the spread of the pest. For more information, go to the website: www.gsob.org.

Variations in vegetative cover type and species composition have a direct effect on fire behavior. Some vegetation types and their associated plant species have increased flammability based on plant physiology (resin content),

biological function (flowering, retention of dead plant material), physical structure (leaf size, branching patterns), and overall fuel loading. For example, the native shrub species that compose chaparral vegetation types present a high potential hazard based on such criteria.

As described, vegetation plays a significant role in fire behavior. A critical factor to consider is the dynamic nature of vegetation types. Fire presence and absence at varying cycles or regimes affects vegetation type succession. Succession of vegetation types, most notably the gradual conversion of shrublands to grasslands with high fire frequency and grasslands to shrub lands with fire exclusion, is highly dependent on fire regime. Biomass and associated fuel loading will increase over time if disturbance or fuel reduction efforts are not implemented. Wildfire disturbances can also have dramatic impacts on plants and plant composition. Heat shock, accumulation of post-fire charred wood, and change in photoperiods due to removal of shrub canopies may all stimulate seed germination. The post-fire response for most species is vegetative reproduction and stimulation of flowering and fruiting. The combustion of above ground biomass alters seedbeds and temporarily eliminates competition for moisture, nutrients, heat, and light. Species that can rapidly take advantage of the available resources will flourish. It is possible to alter successional pathways for different vegetation types through manual alteration. This concept is a key component in the overall establishment and maintenance of fuel reduction projects.

FIRE ENVIRONMENT

The fire environment is defined as the surrounding conditions, influences, and modifying forces that determine wildfire behavior. Firefighters recognize three components of the fire environment: weather, topography, and fuel. These components affect the likelihood of a fire starting, the speed and direction at which the wildfire will travel, the intensity at which a wildfire burns, and the ability to control and extinguish a wildfire. Although weather and topography cannot be changed, the fuels (or vegetation) can be modified. Consequently, many of our opportunities to reduce the wildfire threat lie in proper management and manipulation of wildland vegetation.

Of the factors listed above, fuels (vegetation, buildings, etc.) are the component that is targeted most often since this factor is the most easily affected. For example, vegetation can be removed or manipulated in ways that will dramatically reduce the fire risk. Additionally, homes can be “hardened”, for instance, built with non-combustible or fire-resistant materials and maintained with adequate defensible space.

While the weather cannot be controlled, it is important to understand what types of weather increases the fire hazard and what options there are for reducing this hazard. An example of this is limiting certain activities including open burning, welding, or mowing when weather conditions are hot and dry.

As with the weather and topography, the terrain cannot be significantly altered to reduce the fire hazard. Terrain, however, has a strong influence within the fire environment and should be carefully assessed when designing fire hazard reduction treatments. Aspect has a strong bearing on the type of vegetation present, the temperature, and moisture regime of the soil and vegetation. Slope steepness (gradient) is important since fire behavior usually increases with steepness. Slope position (ridge, valley, saddle, draw, etc.) should be considered when planning fire prevention measures. For example, additional defensible space may be warranted where slopes are steep and if positioned on a warm southerly aspect and/or within a “chimney” (draw, saddle).

“Full alignment” is a term used to describe the fire environment when all the conditions are conducive for increased fire activity. This occurs when fires burn in heavy fuels, during hot/dry weather, with strong winds blowing up steep slopes and draws. Highest priority for fire prevention measures should be focused on areas where these types of conditions are known to occur or are considered likely.

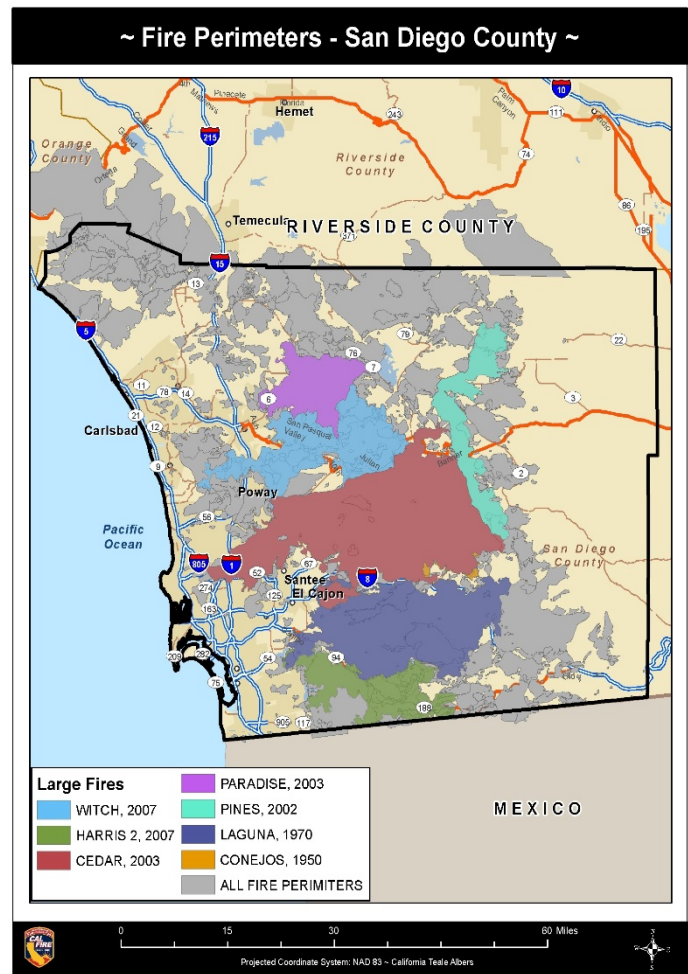
When people are living in high-hazard fire environments, the human-built environment becomes an important factor in predicting the loss of life and property. Untreated wood shake and shingle roofs, narrow roads, limited access, lack of fire-wise landscaping, inadequate water supplies, and poorly planned subdivisions and lack of ember vents and boxed eaves are examples of increased risk to people living with the threat of wildfire.

FIRE HISTORY

Fire history is an important component in understanding fire frequency, fire type, significant ignition sources, and vulnerable areas/communities. The topography, vegetation, and climatic conditions associated with San Diego County combine to create a unique situation capable of supporting wildfires. The 2003 and 2007 Fire Siege burned over half a million acres of coastal sage, chaparral, and forest lands. Moreover, the San Diego Unit has a long history of major wind driven fire occurrence distributed throughout the county with only the lower desert and immediate coastal areas excluded. The San Diego County Fire History map shows that the county has had a significant history of major fire incidents over the last 50+ years. Almost every community in San Diego County has been threatened by wildfires that have occurred during this period. Readily available fuels, influences of topography and Santa Ana winds, present year-around fire suppression challenges for the Unit.

Typically, the average number of fires per fire season is approximately 510 fire starts over the last ten years and the average number of acres burned is about 15,000 acres a year (excluding the 2003 and 2007 Fire Siege years). Generally, the leading causes for unwanted fires are debris burning, vehicles and underdetermined caused fires. Campfires are another cause of wildfires; however, these camp fires are typically related to the border region and international travelers.

Combine these factors with the populace continuing to move to the WUI area, the San Diego Unit will continue the efforts to address this situation. Due to the potential for extreme fire weather in the Unit, strategic solutions have been developed. During times of extreme fire weather, the Unit will staff additional fire engines (reserve and camp), additional hand crews, mobilize strike teams throughout the state, pre-position additional air tankers from other bases, and inform the public, via media and other informational venues, to help prepare themselves in case of wildfires in the county. The San Diego County Office of Emergency Services (SDCOES) developed a Community Wildfire Protection Plan to help facilitate communities in establishing local “plans.” These plans include evacuation routes, safe zones, emergency agency response, critical infrastructure protection, and mitigation strategies.

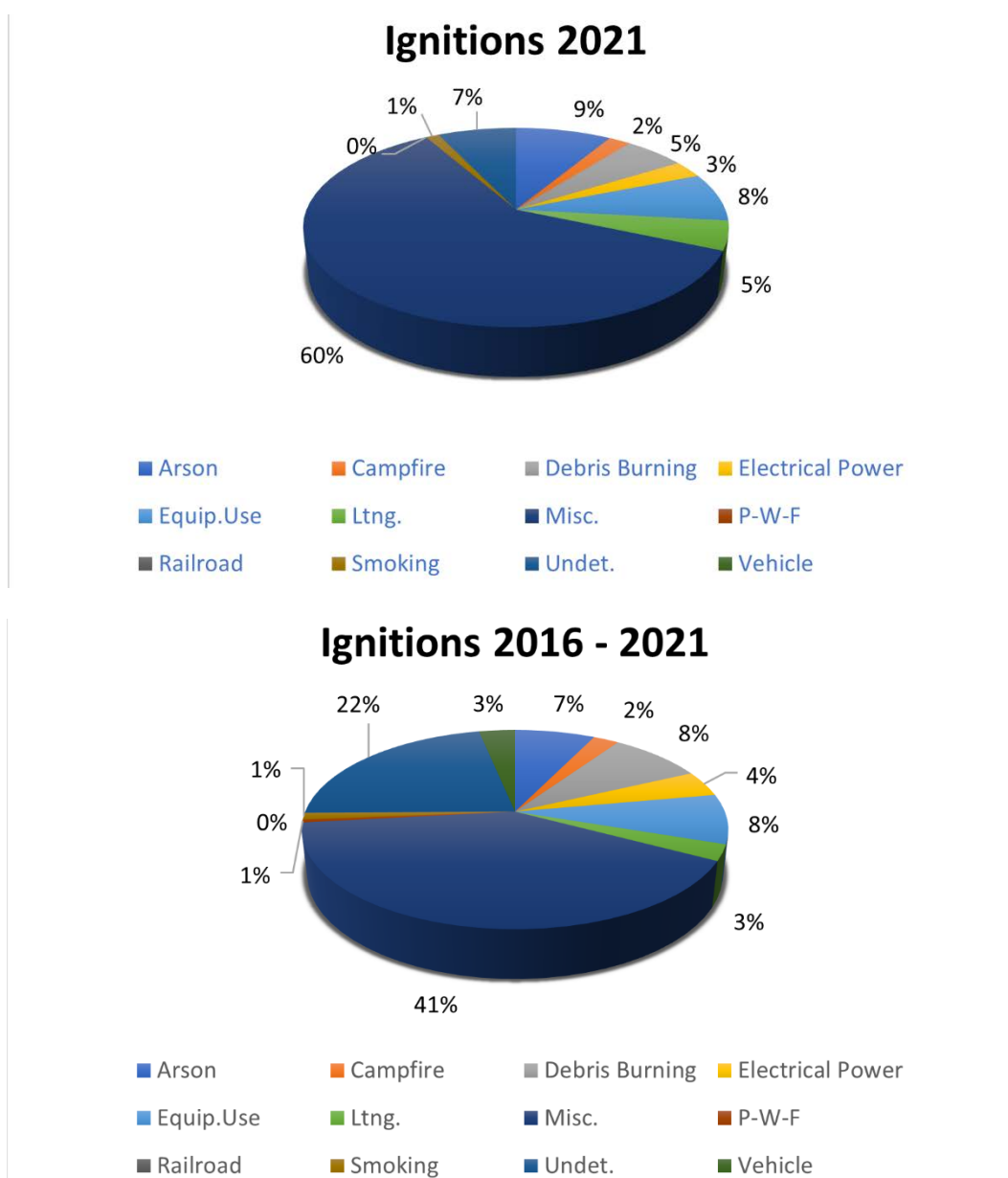


Based on historical fire perimeter data within the county, repeated burning is observed primarily in the Cuyamaca and Laguna mountain ranges. Land ownership (federal) and fuel type (chaparral) appear to be significant factors affecting the geographic distribution of fires in San Diego County. Grass-dominated lands in the foothill portions of the County exhibit small, well dispersed burn perimeters, while the heavier chaparral fuels in the central portion of the County exhibit a repeated burn pattern, larger fire perimeters, and a more concentrated distribution of fire perimeters. The average interval between large wildfires more than 20,000 acres burning within San Diego County is 7.1 years, with intervals as short as 1 year and as long as 22 years.

IGNITION HISTORY

Wildfires are the result of an ignition source, fuels, and conditions that allow a fire to grow. Ignition sources are commonly divided into natural causes and human causes, including both accidentally and intentionally ignited fires. The ignition information provided in this section is categorized by the original call for service. The most common ignition sources for this region include structure fires, vegetation fires, debris/rubbish burning, unauthorized debris pile burning, and vehicle fires. In general, debris burning caused fires tend to be associated in the northern portion of the county, although debris burning causes are noted in other areas within the county. While campfires are another cause of vegetation fires, these camp fires are typically related to the border region and international travelers. The map below reflects the distribution of ignitions throughout the County.

A significant number of unwanted fires are listed as undetermined, meaning they are currently under investigation, or a definitive cause could not be identified. There was a total of 187 wildland ignitions in 2021 and the six-year total (2016 to 2021) was 1080. The pie charts below illustrate the cause of ignitions by percent for 2021 and the cause of ignitions by percent from 2016 through 2021.



UNIT PREPAREDNESS AND FIREFIGHTING CAPABILITIES

San Diego Unit Headquarters is located at 2249 Jamacha Road in the unincorporated area of San Diego County, near the city of El Cajon. The Unit Administration Offices, Mobile Equipment Repair Shop, Service Center, Inter-Agency Training Center, Inter Agency Communication Center, and the Monte Vista Fire Station #20 are located on the 14-acre headquarters facility. The following is a list of resources available for emergency response and support services:

The San Diego Unit Resources at a Glance

Unit Operational Facilities		
•	Schedule B Fire Stations	18
•	Schedule A Fire Stations	23
•	Air Attack Base	1
•	Helitack Bases	2
•	Conservation Camp	2
•	Fire Centers (Rainbow and San Diego)	3
Unit Operational Equipment		
•	CAL FIRE Type III Engine - Frontline	27
•	CAL FIRE Type III Engine - Reserve	5
•	CAL FIRE Type III Engine - Camp	3
•	CAL FIRE Bulldozer	4
•	CAL FIRE OV-10 Air Attack Aircraft	1
•	CAL FIRE S-2T Air Tanker	2
•	CAL FIRE CDC/CCC Hand Crews	4**
•	CAL FIRE Fuels Reduction Hand Crew	1
•	CAL FIRE Firefighter Hand Crew	6
•	CAL FIRE/ SD County Type II Helicopter	3
•	SDGE/SD County Type I Helicopter	3
•	USFS Type II Helicopter	1
•	USFS Type I Helicopter	1
•	SD County Fire Type I Engine – Frontline	23
•	SD County Fire Type I Engine – Reserve	8
•	SD County Fire Type III Engine	5
•	SD County Fire Type VI – Patrol	12
•	SD County Fire Truck Company	2
•	SD County Fire Water Tenders	14
•	SD County Urban Search & Rescue (USAR)	4
•	SD County Squad/Water Rescue	4
•	SD County Rescue Ambulances	3
•	Cooperative Equipment -Type I Engine	4
•	Cooperative Equipment -Type III Engine	1

** Dependent on CDC staffing



The protection of 1.4 million acres of SRA wildland and urban interface is provided by eighteen “Blue Book” fire stations geographically located 15 to 20 miles apart. To manage the 18 fire stations, the Unit is divided into seven battalions with a Battalion Chief managing two to three fire stations. During Peak Fire Season, the Unit covers 27 frontline Type III Fire Engines at the eighteen fire stations, with a work force of 332 Permanent Firefighters and 320 Seasonal Firefighters.

The San Diego Unit currently has several Cooperative Fire Agreements: Deer Springs Fire Protection District, Ramona Water District, San Diego County Fire. In addition to these Cooperative Fire Agreements, the Unit has Dispatch Agreements with Campo, Santa Ysabel, and La Jolla Reservation Fire Departments, Mercy Ambulance, Borrego Fire Department, Mercy Air, Reach Air, and San Diego County.

The San Diego Unit participates in the San Diego County Master Mutual Aid Agreement between all of the Municipal Fire Agencies along with several smaller Auto-Aid and Mutual-Aid Agreements with local fire agencies. All of the Agreements are intended to provide a higher level of fire and medical services to the public through response of the closest resource.

In addition, four bulldozers are staffed at the following locations: San Diego Unit HQ, Campo Station 40, Rainbow Fire Center and Puerta La Cruz Conservation Camp. By a Cooperative Agreement with the California Department of Corrections and Rehabilitation, 4 inmate hand crews are budgeted at two Conservation Camps. Puerta La Cruz Conservation Camp are staffed with female inmates located in the northern portion of San Diego County. La Cima Conservation Camp is staffed with male inmates in the southern part of the county. Additionally, one California Conservation Crew is staffed at San Diego Headquarters.



The Ramona Air Attack Base is located in the center of San Diego County in the unincorporated area of Ramona. Ramona Air Attack Base is a multiagency base shared with the United States Forest Service. Two CAL FIRE S-2 turbo prop fixed wing air tankers and one OV10 Air Attack plane are staffed at the Ramona Air Base year-round. Due to the location of the air base the fixed wing aircraft can arrive at scene to most locations within the county in twenty-five minutes of receiving the dispatch. The S-2 air tankers can hold twelve hundred gallons of retardant. The United States Forest Service staffs one Helitack crew on Helicopter 538. Helicopter 538 is a Bell 205 Super Huey that has a fixed water tank that can hold up to 375 gallons of water. During large fires the air base can staff three retardant loading bays to sufficiently supply the heavy demand for fire retardant.

In a unique Cooperative Agreement with the San Diego County Sheriff's Department, the San Diego Unit personnel staffs two San Diego County fire fighting helicopters. County Copter 10, 11 and 12 are Bell 205 Super Huey helicopters that are owned and piloted by the San Diego County Sheriff Department with a fixed 375-gallon water tanks. Copters 10 and 12 are primarily based out of the Sheriff's Special Detail facility at Gillespie Airport in the City of El Cajon. During Peak Fire Season, one of the three Helicopters is staffed with a six to eight person Helitack crew; primarily Copter 12. Copter 10 is primarily designated as the Air rescue copter, which is covered year-round, with designated CAL FIRE paramedics with hoist capabilities. All three helicopters can be staffed with Helitack crews and one as the primary Air Rescue helicopter. During fire season, one of the staffed helicopters would be repositioned to the Sheriff Helicopter base at the Fallbrook Airport in North County. A third copter is also available during staffing patterns and/or to replace one of the other ships during maintenance.

TRAINING

The Unit Training Bureau maintains a highly active and dynamic program. Not only is the Training Bureau tasked with providing and delivering the departmental training program at the Unit level, but it is also tasked with training San Diego County Fire firefighters as well. To assist with delivering and tracking of certifications for CAL FIRE personnel, the Training Bureau utilizes a web-based service, called Vector Solutions, to deliver on-line training courses and to track certifications. Additionally, the Training Bureau coordinates and delivers the annual Wildland Fire Preparedness Exercises, the Interagency Wildland Fire Training, and the Interagency Chief Officers Wildland Fire Workshop.

In terms of supporting this Plan, the Training Bureau provides the following key functions:

- Training to ensure all staff meet Operational Readiness, and
- Training to support the Unit's Pre-Fire/Resource Management, Education and Prevention (PEP) programs.



In terms of meeting the Unit's Operational Readiness Standards, the Training Bureau provides basic and intermediate training courses to support the entry-level firefighter through the Chief Officer/Command Staff disciplines. Key training classes provided by the Training Bureau include: S-190, S-290, C-234 Intermediate Firing Operations and the breadth of the CAL FIRE and NWCG Incident Command courses. Additionally, the Training Bureau coordinates with the Unit's Emergency Command Center and tracks the number and type of Incident Command System qualified and trainee positions within the Unit.

In terms of supporting the Pre-Fire/Resource Management, Education and Prevention (PEP) program activities, the Training Bureau provides and coordinates training that integrates departmental programs. For example, to meet the Fire Prevention Bureau's program objectives for delivering the Defensible Space program, the Training Bureau conducts and coordinates defensible space training for the Defensible Space Inspectors. Furthermore, to meet the Pre-Fire/Resource Management Division program objectives for fuels treatment and acres burned under the Vegetation Management Program, the Training Bureau conducts and coordinates live fire training to include C-234 and Fire Control 7 (FSTEP program by the State Fire Marshal).

Certain training courses require treating vegetation, such as the faller certification course and the firing operations courses. The Training Bureau coordinates with Pre-Fire/Resource Management Division to ensure a suitable location and the training site complies with the environmental regulations through the Vegetation Management Program (VMP) or through the California Environmental Quality Act (CEQA).

EMERGENCY COMMAND CENTER

The San Diego Inter-Agency Emergency Command Center (ECC) is a Command Center (a dispatch office supervised by seasoned fire suppression professionals) staffed in partnership with the United States Forest Service (USFS) Cleveland National Forest. The San Diego ECC provides dispatch, communications, and support service for emergency operations within the CAL FIRE San Diego Unit and Cleveland National Forest. The ECC provides, by contractual agreement, command-communication center services to numerous fire departments, districts and ambulance providers. Additionally, the ECC staff provides Emergency Medical Dispatch “pre-arrival” care instructions to the caller when necessary. In order to coordinate and dispatch the closest resources to all incidents, the ECC continuously monitors the location and status of more than 200 fire and medical resources and several hundred personnel. The ECC is in continuous development of additional VHF radio repeater sites allowing greater VHF radio coverage for emergency response personnel and acquired additional 800 MHz radio channels to meet increasing operational communication needs.

The ECC supports “prescribed burning” operations for brush clearing and vegetation fire fuel reduction projects. They coordinate the processing of the Live Fire Use Approval/Notification Form (FC-400) between the Incident Commander, Unit Duty Chief, Region Duty Chief, and the Region Operations Center.

The ECC employs several evolving technologies to enhance the flow of information with emergency response personnel including; Automatic Vehicle Locators (AVL), Mobile Data Computers (MDC's), and connectivity between the CAL FIRE Computer Aided Dispatch computer system (CAD) and allied agency CAD systems using the Regional CAD Interoperability Project (RCIP). This interface includes the Dynamic (progressive) routing of multi-agency resources by the ECC which also allows us to track and coordinate emergency apparatus in order to dispatch the closest resource to an emergency, regardless of agency affiliation or jurisdiction.

The ECC, in coordination with field staff uses a variety of GIS tools including Intterra, Tablet Command, and Technosylva, all of which are situational awareness and collaboration tools. These tools combined with AVL/ MDC, help with information gathering to and from field personnel. All of these processes help to streamline and create efficiencies in dispatching the closest resource.

The remaining technology system is the High Performance Wireless Research and Educational Network (HPWREN) project which uses strategically placed high speed camera network throughout San Diego County which allows the ECC staff to visually confirm the existence and intensity of a fire from the detection of a “new fire” to the progression and monitoring of an existing fire.



AIR OPERATIONS

Ramona Air Attack Base serves as the regional fixed wing aircraft center. The runway at Ramona Air Attack Base is approximately 5,001 feet in length. In addition, San Diego has established a Brown Field Reload Base that may be activated by the Southern Area Geographic Coordinating Center (South Ops.) if determined that the reload base would be beneficial to the State's firefighting mission. Brown Field has a 7,972 foot runway which will allow quick reloading of various air tankers including a Type 1 VLAT (Very Large Airtanker).

In response to the San Diego Firestorm 2007, a Memorandum of Agreement with the United States Navy and an Operating Plan with the United States Marine Corps was signed that allows San Diego based military helicopters to assist firefighting efforts within San Diego County. To ensure military crews are prepared, annual training is conducted with the three San Diego military bases. In December 2017 two Navy helicopters and two USMC helicopters were deployed to assist firefighting efforts on the Lilac Fire, which consumed 4,100 acres and destroyed 157 structures. In 2020, multiple helicopters from the Navy and USMC were once again deployed to assist on the Valley Fire.

The San Diego Unit operates one of the most comprehensive firefighting aviation programs in the Nation. The Unit operates two aviation programs; a rotary wing and a fixed wing program.

ROTARY WING PROGRAM

The rotary wing program is based out of Gillespie airport and is an interagency program operating three Type II Bell Super 205 helicopters. This is a unique program that combines San Diego County Sheriff pilots with CAL FIRE personnel. One of the three is staffed with a Helitack crew and the second provides an air rescue platform to perform rescue and firefighting missions. The third is utilized as a maintenance spare/surge capacity to ensure there always two helicopters operational. The Sheriff's Department has additional auxiliary aircraft that are utilized for special missions when applicable, such as HLCO, reconnaissance, and law enforcement.

FIXED WING PROGRAM

The fixed wing program operates out of the Ramona Air Attack Base. It consists of one OV-10 Air Attack aircraft and two S-2T Type III Air Tankers.



FIRE CENTERS



SAN DIEGO FIRE CENTER

The San Diego Fire Center is located within the San Diego Unit Headquarters. This facility will house CALFIRE Firefighter I, California Conservation Corps (CCC) and California National Army (CAN) hand crews in the San Diego Unit. These young men and women will provide frontline fire response to the State of California, as well as fire prevention work on natural resource projects in San Diego County and the surrounding community.

RAINBOW FIRE CENTER

In 1946, the Rainbow Conservation Camp was opened as the first permanent male conservation camp. Rainbow made history again when it converted to a female camp in 1983. The camp is making history again with a new name and a new mission. The Rainbow Fire Center is the newly renovated facility that will house CALFIRE Firefighter I hand crews in the San Diego Unit. These young men and women will provide frontline fire response to the State of California, as well as fire prevention work on natural resource projects in San Diego County and the surrounding community.

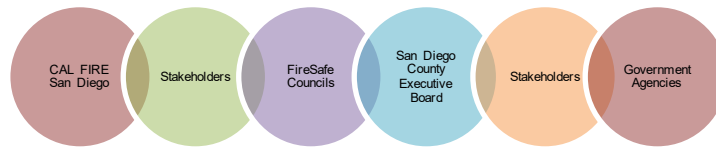
FOX FIRE CENTER

The Fox Fire Center is located in Northern San Diego County and sits at the Eastern base of Palomar Mountain. Converted from a county summer youth camp, the facility will house 2 firefighter hand crews each day. These young men and women will provide frontline fire response to the State of California, as well as fire prevention work on natural resource projects in San Diego County and the surrounding community.

CAMPS PROGRAM

The Conservation Camp Program, in partnership with the Department of Corrections and Rehabilitation can support 9 hand crews but is currently staffed with three. These crews assist with fire operations, pre-fire/resource management activities and projects, and other public agencies and approved non-profit organizations for public service. A total of two conservation camps are located in the San Diego Unit. One is located in the Southeast Division; La Cima Conservation Camp is staffed with male inmates. The other is located in the Central Division; Puerta La Cruz and is staffed with female inmates.

When the hand crews are not assigned to emergency incidents, they serve as the key workforce for implementing pre-fire/resource management activities and projects. Typically, the camps provide at least 200 crew days per camp per year toward pre-fire/resource management activities and projects. Nearly all fuel reduction projects listed in Appendix A and B are implemented through the use of conservation camp crews. In terms of funding support for camp crews, the SRA Fire Protection Funds (FPF) provides reimbursement funds to offset operational cost and support fuel treatment projects. Fire safe councils may utilize camp crews for community fuels treatment projects, especially for those projects identified in their Community Wildfire Protection Plans.



SECTION II: COLLABORATION

COORDINATION AND COLLABORATION

Nearly all pre-fire/fuels treatment, resource management activities, and projects described in the San Diego Unit 2021 Strategic Fire Plan involve meeting and coordinating with various stakeholders and collaborators. Notably, the Unit is actively engaged with the San Diego County Board of Supervisors and county services. This includes:

- San Diego County Fire
- San Diego County Sheriff's Department
- San Diego County
- San Diego County Planning and Development Services Department
- Various local fire protection districts
- Bureau of Land Management (BLM)
- United State Forest Service (USFS)–Cleveland National Forest
- USFS-Forest Health Protection
- US Fish and Wildlife Service
- California State Parks and Recreation – Anza-Borrego State Park, Palomar State Park and Cuyamaca Rancho State Park
- California Department of Fish and Wildlife
- California Department of Transportation (CAL TRANS)
- San Diego County Department of Public Works.



Besides the coordination and collaboration with agencies, the Unit serves as an active partner in the San Diego County Fire Chiefs Association. This is organization brings together the firefighting leaders from city, county, state and federal organizations to discuss and coordinate firefighting issues of San Diego County.

The Border Agency Fire Council (BAFC) is a binational organization made up of twenty United States and Mexican government agencies and organizations representing fire protection, law enforcement, legislators, emergency responders, natural resource managers, and elected officials who address public safety issues pertaining to wildfire, rescues and medical emergencies along the U.S./Mexico international border. The Border Agency Fire Council was formed with the goal of saving lives, property and to protect the sensitive habitat of the border area.

Emergency Mutual assistance Program is an Operational plan prepared to assist in decision making and guide in proper tactical application when responding to incidents involving possible cross border activities covered under the "Mutual Assistance Plan". This document details the four possible scenarios that may involve cross border operations and lists the procedures to follow for each. Each of these scenarios requires adherence to specific procedures, both internal and external, developed in concert with US and Mexican border protection agencies and the US and Mexican Consulates in support of the Mutual Assistance Plan.

The [San Diego County Fire Safe Council](http://firesafesdcounty.org/fsc-support/local-fscs/), in partnership with Resource Conservation District, is a collaborative group of county, state and federal agencies working with volunteers and community members interested in creating fire safe communities. They provide assistance with community support, coordinate with the California Fire Safe Council and provide direction on developing Community Wildfire Protection Plans. Currently, 38 fire safe councils exist in San Diego County. More information regarding Firesafe Council location and contacts can be found at: <http://firesafesdcounty.org/fsc-support/local-fscs/>

San Diego Gas and Electric Company (SDG&E), in concert with their parent company Sempra Energy, received approval from the California Public Utilities Commission to develop and implement the Sunrise Powerlink project. One condition of the Environmental Impact Report (EIR) for this project is to establish a Defensible Space Fund and a Firefighting Mitigation Fund.

To fulfill this condition, SDG&E established a working group, identified as the Sunrise Powerlink Fire Mitigation Group (SPFMG). Comprised of the affected firefighting departments/agencies, this group provides coordination and oversight of the Defensible Space Fund (\$2.8 million dollars each year for 58 years for homeowners) and the Firefighting Mitigation Fund (\$3.2 million dollars for the firefighting agencies). A Memorandum of Understanding (MOU) was signed on January 2012. The first phase of the transmission lines was energized in June 2012. In July 2012, the Defensible Space Fund was initiated and made available online to the home owners with the targeted area. In addition, San Diego Gas and Electric also cooperatively funds, with the County of San Diego, two water dropping helicopters available for initial attack vegetation fires anywhere in the county.



SECTION III: VALUES AT RISK

WILDFIRE RISK TO ASSETS

Fire is both a natural ecological force and common landscape agent of change throughout much of California. CAL FIRE's Fire and Resource Assessment Program (FRAP) prepared the document entitled California's Forest and Rangelands: 2017 Assessment. This document satisfies the 2008 Federal Farm Bill provision that each state assesses forest resources, which is intended to identify key issues facing each state and requires the delineation of spatial areas called Priority Landscapes. Priority Landscapes are intended to focus investments and other programs on addressing issues identified in the assessment. Priority Landscape datasets related to fire include an evaluation of fire risk as related to community water, ecosystem health, human infrastructure, range, recreation/open space, and wildlife. While numerous assets have been identified, considerable effort has been focused on reducing the risk to life and property. Additionally, California's Forest Management Task Force, a multi-agency collaboration, is tasked with restoring health and reducing the wildfire threat to California's Forests. California's Forest Management Task Force was organized to protect the environmental quality, public health, and economic benefits that healthy forests provide to California. The Task Force aims to increase the rate of forest treatments and expand state wood product markets through innovation, assistance, and investment, a challenge that requires a multi-solution response. The Forest Management Task Force is committed to bringing everyone to the table and using science to guide us as we work to restore our lands.

FIRE RISK VS. FIRE HAZARD

The concept of fire risk vs. fire hazard can be confusing and these terms are often used interchangeably. The purpose of this Plan is to assist fire agencies with development of collaborative methods in reducing the fire 'risk' within their jurisdictions by using strategies and tactics that will reduce or eliminate one or more fire 'hazards'. Examples of fire hazards include dense stands of decadent brush, faulty wiring, broken vehicle exhaust systems, and homes that are not built in accordance with fire code requirements. The fire risk (vulnerability) of a given area constantly rises and falls depending on conditions within the fire environment. Successful implementation of this Plan will result in the meaningful reduction of the fire risk in strategic portions of the County through identification and abatement of important fire hazards.

DEFINING THE WILDLAND-URBAN INTERFACE

A significant risk from fire is posed to the people and houses in San Diego County, as witnessed by an increasing trend in structure loss in wildland fires. These risks are not new. The Wildland Urban Interface (WUI) has been a term in use for three decades. Simply put, the WUI is an area where human development is located in close proximity to open space or lands with native vegetation and habitat that are prone to wildland fires. The WUI creates an environment in which fire can move readily between structural and vegetation fuels. Once homes are built within (or adjacent to) natural habitat settings, it increases the complexity of fighting wildland fires because the goal of extinguishing the wildland fire is often superseded by protecting human life and private property. Nowhere is this more apparent than in San Diego County. Most of the population lives in lower elevations dominated by chaparral shrublands susceptible to frequent high-intensity crown fires.

Hence, the WUI's location, extent, and dynamics will continue to be essential information for wildland fire management. With respect to defining the WUI, the following are the main components used in combination to arrive at a spatially definable area:

- Wildland fire hazards
- Human assets exposed to those hazards
- Proximity

WILDLAND FIRE HAZARD

Fire Threat is derived from the integrated assessment of wildland vegetation fuels, terrain, expected fire weather, and past fire occurrence. Threat is a measure of the combined influence of both the potential for burning and the expected fire behavior. For the specific purpose of characterizing the Fire Threat to houses and other human assets, Fire Threat Exposure was developed to reflect a specific area's capacity to ignite from both a spreading fire front and from firebrands produced from the fire front. Thus, Threat Exposure integrates Fire Threat across the landscape to represent the combined influence of all lands producing heat from both flames and firebrands, which could result in exposure to a house.

HUMAN ASSET EXPOSURE

Using a workflow developed by FRAP, census data and land cover information on commercial properties were utilized to develop a data layer that characterizes these assets/communities along a structure density gradient. In other words, greater structure density carries more value per unit area, and hence when exposed to hazards represents a greater risk of loss. Ranging from high density to low, areas with greater than one house per acre and commercial lands were defined as "Urban." Areas with housing ranging from one house per acre to one house per five acres were designated as "Rural Residential." Lands supporting houses one house per five acres to one house per twenty acres were defined as "Intermix." Lands containing a lower density than one house per twenty acres were not considered as having sufficient asset concentration to be considered WUI for purposes of this analysis.

PROXIMITY

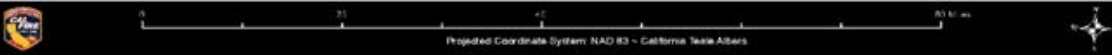
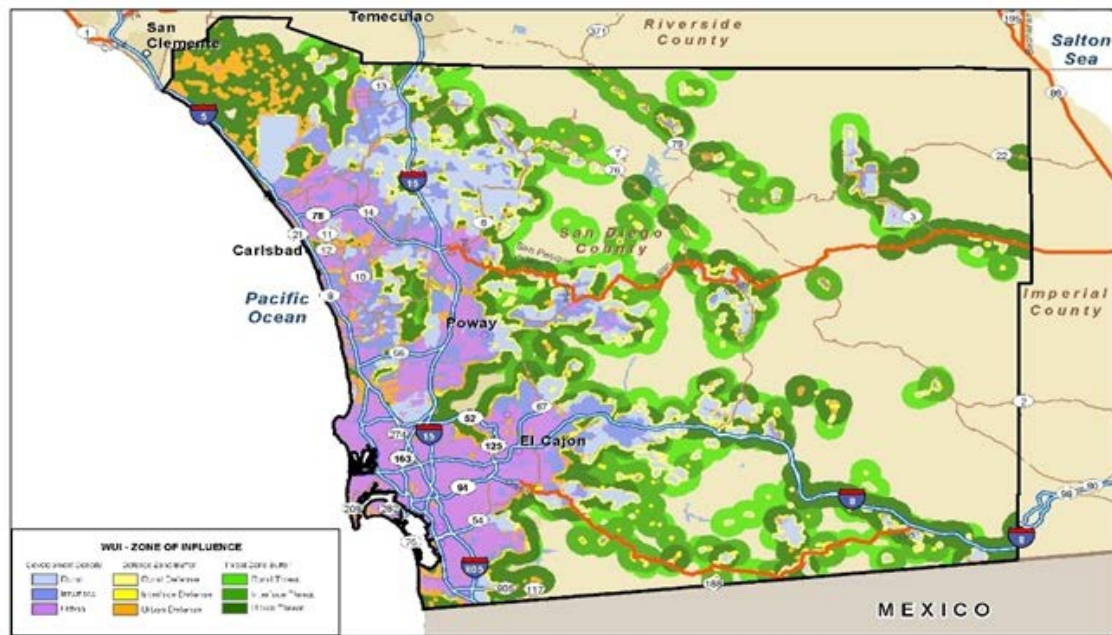
The final concept used to define the WUI is proximity. In basic terms, proximity refers to the intersection between human assets and the wildland fire threat. Reflecting that many fires which impact areas of assets come from adjacent wildland areas, a zone of influence around community areas was developed that represents the proximal lands where fuel reduction treatments would likely influence risk to people, property, and other infrastructure. Taken in total, a combination of the three concepts (fire hazard, human assets, and proximity) allows a complete picture of the WUI to be derived which reflects specific hazard levels, asset concentrations and value, and the spatial relationship between the two. Higher hazard levels, more assets exposed to those hazards, and nearness all are important considerations in spatially defining the WUI.

WILDLAND-URBAN INTERFACE ZONE OF INFLUENCE

While defining and mapping the WUI is necessary for prioritizing areas in need of risk assessment and mitigation measures, many strategies designed to protect these areas from wildfire typically focus on fuel reduction projects outside the immediate area of development.

The zone of influence model combines population density, proximity to the wildland, and the wildland fire threat to arrive at true representation of how the WUI is reflected spatially. The model assigns the labeling of these areas based on a priority of proximity and then density (higher density prioritized over lower density). By including measures of both proximity and asset density exposed to wildfire risk, the classification is designed to allow for prioritization of treatments based on characteristics that would likely result in higher levels of risk reduction to those features contained within the WUI.

~ Wildland Urban Interface - Zone of Influence ~



ASSETS

For the purposes of this Plan, assets are those values that may be at risk from wildfire. Assets in San Diego County include power generation and transmission facilities, emergency communication facilities, transportation infrastructure, tourist and recreation areas, environmental areas, military installations, natural resource production facilities, and commercial fishing facilities. Table 8 presents the assets in San Diego County, by Planning Area.

Asset	Battalion
Trains / Rail System	1, 4, 7
Transportation Corridors	All
Transmission Lines / Substations	All
Sunrise Powerlink Transmission Lines	3, 4, 8
Airports	5, 8
Pipelines	1, 3, 7
Emergency Communication Sites / Systems	All
Media Transmission Sites	3, 8
UCSD HPWREN Network	All
Water Reservoirs	All
Crestridge Ecological Reserve	3
Sycuan Peak Ecological Reserve	3
Rancho Jamul Ecological Reserve	3
Otay Mountain Ecological Reserve	3
McGinty Mountain Ecological Reserve	3
Blue Sky Ecological Reserve	8
San Diego County Campgrounds	3, 4
Live Oak County Park	1
Wilderness Gardens Preserve	1
Julian Museum & Pioneer Park	5
MCCS - Camp Pendleton	1
Navy Remote Training Site - Warner Springs	5
Laguna Mountain Recreational Area	4
McCain Valley Recreational Area	4
Corral Canyon OHV Area	4
Palomar Observatory	7
SDSU Mount Laguna Observatory	4
Cuyamaca Lake Recreation Area	5
Non-Profit Conservancies	3, 4, 5, 8

WILDLAND-URBAN INTERFACE AREAS (WUI)

Prefire planning efforts have identified the following WUI areas based on the combination of wildland fire hazards, human assets exposed to those hazards and proximity. These priority areas would benefit from fuel reduction efforts and other Prefire planning efforts intended to minimize ignitions and promote public and firefighter safety.

Projects implemented under the WUI designation would take place outside of the 100 feet defensible space requirements under PRC 4291, and within the outer edge of the defined WUI area as described earlier in this section. These projects would focus on directly protecting communities and assets at risk from potential damage from wildfire's originating in the adjacent wildlands as well as protecting the wildlands from fires transitioning to the wildlands from human infrastructure by modifying the fuels. Projects conducted in the designated WUI would include all treatment types to achieve a reduced risk to the WUI. The priority WUI areas are identified by Planning Area.

<p>Battalion 1</p> <ul style="list-style-type: none"> • Deluz WUI • Deluz Heights WUI • Rainbow WUI • Fallbrook WUI • Bonsall WUI • Hidden Meadows WUI • Vista WUI • San Marcos WUI 	<p>Battalion 5</p> <ul style="list-style-type: none"> • Holcomb Village WUI • Warner Springs WUI • Ranchita WUI • Santa Ysabel WUI • Julian WUI • North Peak WUI • Harrison Park WUI
<p>Battalion 2</p> <ul style="list-style-type: none"> • Harbison Canyon WUI • Alpine WUI • Crest WUI • Flinn Springs WUI 	<p>Battalion 7</p> <ul style="list-style-type: none"> • Del Dios WUI • Valley Center WUI • Pala WUI • Pauma Valley WUI • Rincon WUI • Palomar Mountain WUI
<p>Battalion 3</p> <ul style="list-style-type: none"> • Jamul WUI • Lyons Valley WUI • Dulzura WUI • Deerhorn Valley WUI • Barret WUI • Tecate WUI • Potrero WUI 	<p>Battalion 8</p> <ul style="list-style-type: none"> • Ramona WUI • Fernbrook WUI • San Diego Country Estates WUI • Four Corners WUI
<p>Battalion 4</p> <ul style="list-style-type: none"> • Descanso WUI • Guatay WUI 	<ul style="list-style-type: none"> • Pine Valley WUI • Lake Morena WUI • Campo WUI • Boulevard WUI

COMMUNITIES AT RISK (FIRE SAFE COUNCILS & CWPPS)

The listing of Communities at Risk (CAR) is derived from the National Fire Plan. The intent of listing is to help people protect their communities and property from catastrophic wildfire by providing funding, when available, to reduce the risk from wildfires. The California Fire Alliance assists the federal agencies charged with implementing the National Fire Plan, by providing a list of these communities on the website: http://www.cafirealliance.org/communities_at_risk.

A Community Wildfire Protection Plan (CWPP) is a plan developed at the community level in areas at-risk of wildfire. They are created in collaboration with community members, fire agencies operating in the area, local government, and other interested stakeholders.

A CWPP has two main functions. First, to identify and prioritize fuel reduction treatments needed in the local area and outline methods for addressing these. And second, to make recommendations for measures that reduce structural ignitability. The process of developing a CWPP can help a community identify and clarify priorities for the protection of life, property, and critical infrastructure in the wildland-urban interface (WUI). It is intended to be a living document and updates are expected as the needs in a community change and evolve.

CWPP background: The Healthy Forests Restoration Act, a landmark legislation which includes the first meaningful statutory incentive for the US Forest Service and the Bureau of Land Management to give consideration to prioritized fuel reduction projects identified by local communities, was enacted in 2003. This led to the development of the CWPP as a community-based forest planning and fuel reduction prioritization document. The Healthy Forests Restoration Act and the Community Wildfire Protection Plan emphasize the need for federal, state, and local agencies to work collaboratively with communities in developing hazardous fuel reduction projects and place priority on treatment areas identified by the communities themselves in a CWPP.

The role of CWPPs: The Healthy Forest Restoration Act of 2003 provides communities with a great opportunity to influence where and how agencies implement fuel reduction projects on federal or private lands, as well as how additional federal funds may be distributed for projects on non-federal lands. A CWPP is the most effective way to take advantage of this opportunity.

The benefits of a CWPP: These documents and the measures they recommend can help enhance safety and reduce risk of damage to structures and watersheds. Creating a CWPP can mobilize your community to take action to protect lives, property, structures, and community livelihoods. In addition, communities with a CWPP are given priority for certain funds for hazardous fuel reduction projects.

The list on the following page identifies Communities at Risk within the State Responsibility Areas by CAL FIRE Division and Battalion representatives. Additionally, if there is a Firesafe Council (FSC) and/or Community Wildfire Protection Plan (CWPP) associated with the community, then there is an "X" for that category.

<u>Battalion</u>	<u>CAR</u>	<u>FSC</u>	<u>CWPP</u>
1	De Luz Canyon		
	Deer Springs	X	X
	Hidden Meadows	X	X
	Pala Mesa Village		
	Rainbow		
	Twin Oaks		
	San Luis Rey Heights		
	Fallbrook	X	X
2	Alpines Heights	X	X
	Carveacre	X	X
	Crest	X	X
	Flinn Springs		
	Harbison Canyon	X	X
	Sycuan Summit		
3	Barrett	X	X
	Dulzura	X	X
	Jamul	X	X
	Lawson Valley	X	X
	Lyons Valley	X	X
	Potrero	X	X
	Tecate	X	X
4	Boulevard	X	X
	Campo	X	X
	Descanso	X	X
	Guatay	X	X
	Jacumba	X	X
	La Posta	X	X
	Lake Morena	X	X
	Pine Valley	X	X

<u>Battalion</u>	<u>CAR</u>	<u>FSC</u>	<u>CWPP</u>
5	Mesa Grande		
	Harrison Park	X	X
	Julian	X	X
	Stone Ridge (Holcomb Village)	X	X
	Sunshine Summit		
	Warner Springs	X	X
	Whispering Pines	X	X
	Wynola	X	X
7	Harmony Grove		
	Palomar Mountain Communities:	X	X
	Bailey Meadow	X	X
	Crestline	X	X
	Birch Hill	X	X
	Conifer Road Residential areas	X	X
	Rancho Santa Fe	X	X
	Mystery Mountain and Wilkes area	X	X
	Valley Center Communities:	X	X
	Lilac and Keys Creek	X	X
	Couser Canyon	X	X
	Woods Valley	X	X
	Pauma Heights	X	X
Lake Wolford and Canal area	X	X	
8	Barona		
	Ramona Communities	X	X
	Mount Woodson	X	X
	Mussey Grade / Fernbrook	X	X
	Rosemont	X	X
	San Diego Country Estates	X	X

SECTION IV – COMMUNITY RISK REDUCTION

The Community Risk Reduction Program was created in 2019, combining state and county efforts, to identify and prioritize risks with a coordinated application of resources to minimize the probability, occurrence, and/or the impact of unfortunate events. The goal of the Community Risk Reduction Program is to provide and maintain a safe environment for the citizens and businesses in San Diego County through a professional balance of education, enforcement, engineering, fuel reduction, and transportation corridor safety. The Program incorporates Prefire, Law Enforcement, Public Education, and County Fire Marshall services into one collective program providing enhanced coordination between bureaus, as well as unity of command.

COHESIVE STRATEGY

Wildfires do not stop at property boundaries. More than 70,000 communities and 44 million homes are at risk from wildfire in the wildland urban interface (WUI) nationwide— where vegetative fuels and the built environment meet. Over the last ten years, more than 35,000 structures were destroyed by wildfires – an average of 3,500 a year. Risk reduction, on a variety of fronts, can help communities adapt to wildfire. Fire adaptation means communities take mitigation actions so they can live with wildfire without harm and without extensive wildfire suppression efforts.

A key component of community fire adaptation is that there isn't one silver bullet that reduces risk; there are many tools that, when used together and strategically, reduce risk. And it's not the responsibility of one agency or group to mitigate; it's the responsibility of everyone who lives and works in the community. Fire adaptation happens when local multi-jurisdictional stakeholders work together to identify risk, mitigate it, and maintain the work over time.

The San Diego Unit Cohesive Wildland Fire Management Strategy (Cohesive Strategy) effort was designed as a four-phased process to allow for inclusiveness and understanding of the complexities of managing wildfire risks across San Diego County and apply a consistent approach to addressing the wildland fire risk to vulnerable communities. The Cohesive Strategy consist of the following principles:

- Foster fire prevention and safety through community education and training.
- Promote structural hardening and defensible space techniques to improve structure survivability.
- Establish strategic fuel breaks and reduced fuel zones to improve community defense.
- Maintain dependable ingress and egress routes.

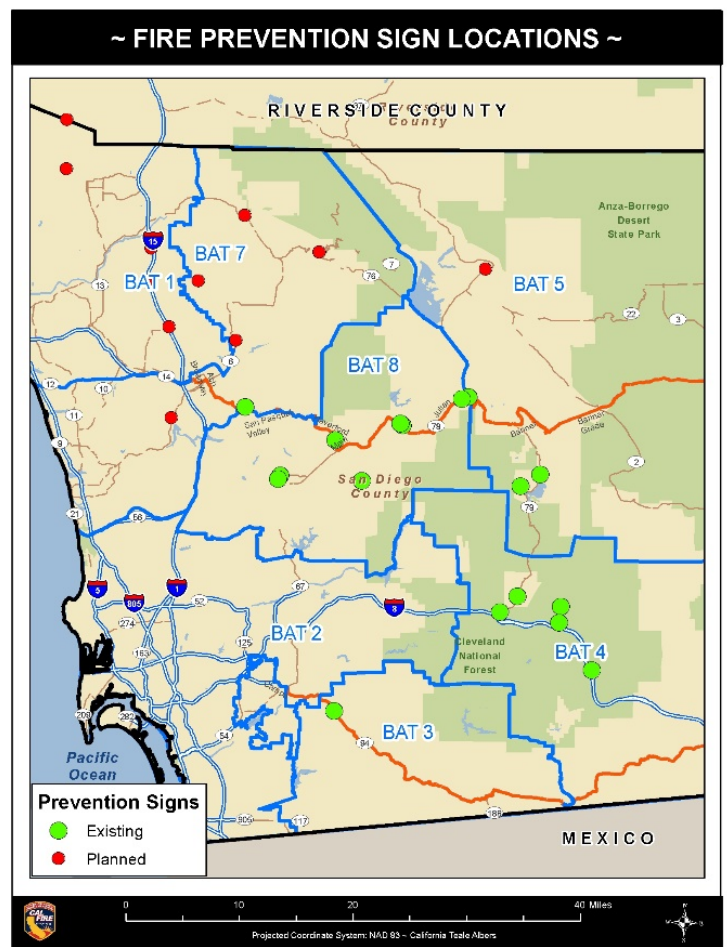
The Cohesive Strategy approach will ensure communities receive sufficient focus and the highest level of protection standards through careful consideration of discrete safety elements that collectively offer a greater degree of resilience than through any one element alone. These strategies were developed to keep communities safe as the fire service moves from the concept of fire prevention to that of community risk reduction.

EDUCATION AND INFORMATION

The CAL FIRE San Diego Unit's Information and Education program utilizes Social Media (such as Twitter, Flickr, etc.) which allows us to quickly inform, educate and update the public on Fire Dangers and Incident Information, for CAL FIRE. CAL FIRE maintains and updates a website (www.fire.ca.gov) that posts fire information and statistics, Emergency Incidents, Public Service Announcements, News Releases, Statewide Fire Activity and links to other agencies for additional information.

In terms of fire prevention, staff conducts education programs for schools within SRA. School programs are designed to focus on each of the targeted age groups. The first is “Fire Safe Kids”. This is a program designed by the Burn Institute for children in grades kindergarten through 3rd. The topics include the consequences of playing with fire, what to do in case of a fire, and burn prevention & treatment. An engine will show up after to teach the children firefighting gear and equipment as well. The second is “Firefighters Are Your Friends”. This program is geared for Pre-K, TK, and ages under 6. The focuses are building trust with firefighters, fire prevention & what to do in case of a fire. We always have a firefighter get in full structure PPE. In addition, the Information and Education Program also engages in activities such as:

- Strategically placing roadside signs throughout the Unit to educate the public on: fire dangers, the need for burn permits, and other relevant fire prevention education topics. These signs serve as a daily reminder to be Fire Safe while driving in and around high fire danger areas. Currently there are 36 signs placed in strategic locations throughout the County.
- A Cooperative Agreement with 2-1-1 San Diego during major incidents of wildfire or other newsworthy situations. During a disaster, 2-1-1 works with the County of San Diego's Office of Emergency Services to provide public information to the community, rumor control and trend analysis to County officials, report community needs that are not being met, and act as the central communications point for other community agencies and non-governmental organizations. 2-1-1 serves the entire population of the County. and staffs the Joint Information Center for the Unit during emergency incidents, for CAL FIRE and USFS during major incidents of wildfire or other newsworthy situations. This Center provides accurate and timely information to the public through mass media outlets within San Diego, Riverside, Orange and Los Angeles Counties as well as national and worldwide coverage on incidents of a high-profile nature.
- Delivers Information and Educational presentations to service groups (i.e., Kiwanis, Lions, and Women's Clubs etc.), and other homeowner associated or organizations for CAL FIRE on topics such as Community Risk Reduction and Fire Prevention Education. Participates in local community events within SRA and support San Diego County residents, CERT members, and Fire Safe Councils with events, fairs, parades, etc.
- Holding “Fire Operations in the Wildland Urban Interface” workshops to teach the principles used by firefighters in suppressing wildland fires and protecting structures in the WUI. Some of the most at-risk areas for wildfire are in the Wildland Urban Interface, or WUI, which is defined as residential areas that reside next to open space. As more people, homes, and businesses move closer to open space, the risk of wildfire damage is increasing. With this workshop we hope to reduce the damage they cause by learning how fires behave and how we can be better prepared.



- Updates existing presentations to keep them current and relevant, as well as design and develop new presentations on a variety of education topics. Design and build displays, awards, and layouts. Design and construct fire prevention awareness displays for fairs and exhibits. Plan, prepare and develop new fire prevention education programs and handout materials.
- Coordinates the Unit's Volunteer in Prevention (VIP) program utilizing citizen volunteers to assist with all prevention education programs and activities.
- Participates with various public service agencies within the county, to network and cooperate in meetings and committees such as the Border Agency Fire Council and San Diego Burn Institute.
- Design and produce local prevention booklets, pamphlets and videos.
- Maintain multiple social media outlets, including Facebook, Twitter, Instagram and Flickr with a combined public following of over 203K.



ENGINEERING AND STRUCTURE IGNITABILITY

Fire Prevention Bureau works to protect lives, property and natural resources from unwanted fires by proactively investigating all Wildland fires in CAL FIRE's DPA and utilizing appropriate criminal, code enforcement, civil and administrative procedures to deter activities that lead to unwanted human caused fires. The Fire Prevention Bureau also coordinates law enforcement activities with public education and information activities with the Unit Public Information Officer to educate the public, as well as other public safety officials, of specific activities that increase fire risk and preventative measures that can be taken to eliminate or lessen the risk.

In terms of Engineering & Structure Ignitability, the Fire Prevention Bureau provides oversight and coordination with the following:

- Title 24 and Title 19/PRC 4290 are addressed by San Diego County Planning Development Services and San Diego County Fire through certification of the San Diego County Consolidated Fire Code by the Board of Forestry. San Diego County Fire requested and received certification in 1992 and requested and received re-certification in 2009. Requirements are met though application of State and Local ordinances that meet or exceed Title 24 & Title 19 requirements.
- Protection Planning is accomplished during the same processes outlined above by San Diego County personnel working with Fire Marshals from the various Fire Protection Districts that have overlapping boundaries on SRA.



A progressive process typically occurs as a structure is exposed to a wildland fire. First, embers are cast in front of a fire by wind or convection column. In some instances, these fire brands retain enough heat and/or flame that secondary ignitions are possible. Following the lighter ash, heavier embers/firebrands with more surface area and mass, and consequently, more heat, are blown in front of advancing flames and often provide sources of additional ignition to structures and vegetation. Finally, intrusion of a flaming front and the associated radiant heat flux can expose combustible material outside of a building and the exterior of the structure itself to various levels of radiant heat. Studies reveal that the actual exposure of a building to a typical wildland flaming front by the perimeter of a fire is usually less than six minutes. However, exposure to the other forms of ignition source materials can result in proliferation of secondary ignitions of structures or adjacent vegetation and a longer exposure, depending on wind, topography and fuel conditions.

To enhance structural survivability, the primary focus must first include sufficient measures to prevent the ignition of structural materials from objects (fire brands) that are cast in front of the fire and, second, reducing the likelihood that direct flame impingement and radiant heat will occur, preventing flames from penetrating into the building resulting in an interior fire. There are considerable problems in achieving these objectives without the benefit of new construction subject to the latest building codes.

All forms of fire protection are classified as either active or passive. Active fire protection includes implementing specific action to control a fire in some manner. Passive fire protection uses resistance to ignition or provides some form of warning that allows other action to be taken. These two classifications of self-defense mechanisms create different problems regarding being accepted as alternatives for building construction. Furthermore, certain self-defense mechanisms must be incorporated during new construction, and others may only be capable of being added as a retrofit to existing structures. In the absence of ignition resistant construction, the focus for reducing structural ignitability shifts to landscaping and fuel treatment areas.

Many of the residential structures within the County are not built to current building code standards, which have been implemented statewide and are based on intelligence gained from large wildfire events that included structure loss. Based on the type of development within the county and the existing fuels and terrain, structural ignition reduction will primarily be realized through implementation of fuel modification as described in this Plan. Standard fuel treatment prescriptions are presented in the following sections. As previously noted, environmental review and permitting may be required prior to project implementation. This should be completed during the project planning phase once the project scope has been identified.



DEFENSIBLE SPACE INSPECTION PROGRAM

Defensible Space inspection around structures in the CAL FIRE's DPA is accomplished through application of Public Resources Code (PRC) 4291 or the San Diego County Defensible Space Ordinance. CAL FIRE staff completed 260,647 inspections with an average of 18,618 inspections per year since 2007 and completed 31,273 in 2021. San Diego Unit's ability to conduct inspections varies greatly from year to year due to various temporary funding sources and heavy reliance on fire suppression personnel to complete inspections. From 2014 to 2018, funding from the SRA fee provided Defensible Space Inspectors to help conduct inspections throughout the year. The goal is to inspect 34,000 dwellings per year, and all 102,000 dwellings over a three-year period. Currently, funding from the state, county, grants are the revenue sources for this service.

- The San Diego County Defensible Space Ordinance: In SRA that are not within a Fire Protection District and all houses within Fire Protection Districts that have adopted the San Diego County. Defensible Space Ordinance and entered cooperative agreements with SDCF, CAL FIRE utilizes the San Diego County. Ordinance to accomplish Defensible Space around structures. CAL FIRE provides the inspection workforce (personnel) to accomplish all inspections up to compliance or referral to San Diego County staff for code enforcement.
- Public Resources Code 4291: In all other areas of SRA, CAL FIRE utilizes PRC 4291 and the LE-100 inspection process to accomplish defensible space requirements.
- Public Resources Code 4291: In SRA that is within a Fire Protection District that is not in a cooperative agreement with CAL FIRE or the San Diego County Fire, CAL FIRE staff may acknowledge concurrent enforcement of Local ordinances by the FPD as meeting Cal Fire's requirements under PRC 4291.

Building inspections and Pre-Planning activities are accomplished by Fire Suppression personnel at the Battalion level. Each Battalion modifies its activities to meet the unique requirements created by specific cooperative agreements and accomplishment of the State Mission to prevent and suppress wildland fires in the SRA.

PRE-FIRE/RESOURCE MANAGEMENT

CAL FIRE San Diego Unit's Pre-Fire/Resource Management Division focuses on delivering CAL FIRE's Pre-Fire/Resource Management programs to the interested parties and stakeholders in San Diego. The intent is to create a resilient natural environment, which can sustain impacts from natural disturbances: such as wildfire, insect and disease outbreaks, weather events, and other disturbances for the protection of people, property and the natural resources. By integrating technical forestry and resource management services with fire suppression objectives, the Pre-Fire/Resource Management Division produces high quality products and services while delivering prompt, courteous customer services. Activities and services are:

- Support the Unit's fire suppression mission through preparedness, training, and communication.
- Support the Unit's natural resource mission to protect the people, property, and resources of the state.
- Coordinate and collaborate with other agencies, organizations and citizens' groups to promote fire safety and environmental/resource awareness.
- Elevate and enhance public awareness and information on fire safety and environmental/resource protection.
- Ensure the public that tree harvesting (logging) on private forested lands comply with the California Forest Practice Act
- Serve as the Unit's Environmental Coordinator and ensure the compliance with the environmental regulations and the California Environmental Quality Act (CEQA)

Pre-Fire/Resource Management Division is actively engaged in implementing the CAL FIRE SRA FPF projects and provide the following:

- Leadership in the emerging Goldspotted Oak Borer issue (see below) and coordinating with federal, state, county and city agencies.
- Partnership with the Cuyamaca Rancho State Park on a reforestation project
- Planning and implementation of the Vegetation Management Program at the Unit level
- Environmental review for all Unit projects and infrastructure maintenance program
- Oversight for the Kuchamaa Experimental Forest (Wentz Demonstration State Area) for cultural protection.
- See Appendix A for the full list of projects.

Resource Management Activities	Unit Activities
o Forest Practice Enforcement	o Member of the Unit's Executive Team
o Vegetation Management Program	o Bi-national Resource Management Planning
o CFIP and related programs	o Border Agency Fire Council Nat Res Committee
o Service Forestry	o CAL FIRE/Mexico issues & training
o Environmental Coordinator	o SDGE- Sunrise Powerlink Fire Mitigation Group
o Reforestation, Cone Collection and Planting	o Outreach Services
o Pest management	o Fire Safe Councils Support
o Forest Health/Fuels Reduction Grant	o Firewise Community Coordination
o Emergency Watershed Protection	o Grant Application and Administration
o State Forest Land Manager	o Land Use Planning

o Forest Practice Committee	o Fire Danger Operating Plan (FDOP)
Pre-Fire Management Activities	o So Cal Watershed Fire Council
o Unit Pre-fire Plan	o Cuyamaca State Park's Reforestation Project
o PRC 4291 Guideline Interpretation	Fire Suppression Support
o Ignition Mapping	o Chief Officer Coverage
o Fire Hazard, History, SRA GIS mapping	o Incident assignments
o Review outside agencies Fire Mgt Plans	Departmental Program Support
o Fuel Moisture Monitoring Program	o Coordinate with the Archaeology Program
o Micro RAWs Weather Coordinator	o Coordinate with the Urban Forestry Program
o State Fire Assistance Grant	o Coordinate services with area and region offices



VEGETATION MANAGEMENT

CAL FIRE and San Diego County, along with private landowners and cooperating agencies, administer numerous programs which support the California Strategic Fire Plan. In the effort to make the vegetation management achievable this Plan has broken Vegetation Management into three strategic categories: defensible space fuel treatment, non-defensible space fuel treatment, and vegetative management prescriptions. Environmental review must be conducted for all pre-fire management activities that could cause either direct or indirect changes to the natural or human environment. All proposed vegetation management projects (including fuels treatment activities) are subject to the California Environmental Quality Act and environmental review. Listed below are components related to project review.

BIOLOGICAL RESOURCE AND MULTI-SPECIES CONSERVATION PROGRAM

San Diego County is a "hot spot" area for unique and unusual species. With 28 species listed or proposed listed as threatened or endangered and an additional 57 species that are considered sensitive underscores the uniqueness of San Diego natural environment. Given the richness of species, San Diego County's Multi-Species Conservation Program (MSCP) promotes the protection of these species, while balancing the need for use and development of

property. To ensure protection for these species, both the California Department of Fish and Game and the US Fish and Wildlife Service are consulted on all fuels treatment projects.

ARCHEOLOGY

All CAL FIRE projects, such as VMP or fuels management projects, are reviewed by a qualified Department Archeologist, as required by the California Environmental Quality Act (CEQA 1970). As required, each project is evaluated to determine if the project will have any effect on a defined cultural resource. Unit policy is to avoid adverse effects to significant cultural resources (prehistoric or historic resource consistent with CEQA), which is most often by avoidance. This internal practice began with the passage of the Forest Practice Act (FPA 1973). Since the passage of the FPA, archeologists regularly review projects and conduct archeological surveys. A number of other laws play a part in the protection, preservation, and management of cultural resources in California. Also, CAL FIRE State Archeologists participate in the department's response to wildland fires. They participate in assessment teams when called in after a major fire to scientifically evaluate "values at risk" in the affected burned area as allowed under the former Governor's Executive Order.

WATER QUALITY BOARDS

To meet the requirements of the Porter-Cologne Water Quality Control Act, all projects, including vegetation management projects, are reviewed for water quality impacts. Depending on the location of the project, the Unit will consult with the San Diego Regional Water Quality Control Board or the Colorado River Regional Water Quality Control Board.

- Region 7- Colorado River Regional Water Quality Control Board: Orange, San Bernardino, Riverside, San Diego counties
- Region 9- San Diego Regional Water Quality Control Board: San Diego, Orange, Riverside counties

GREENHOUSE GAS EMISSIONS AND AIR QUALITY

All projects must consider greenhouse gas emission as part of the environmental review process. Nationally recognized protocols are used to estimate the total greenhouse gas emissions that will occur due to project activities. Unit projects are evaluated for air quality impacts and where appropriate, smoke management plans are completed, filed and approved with the San Diego County Air Pollution Control District.

INVASIVE SPECIES

Research has indicated some fuels treatment projects may also create opportunities for invasive species (weeds) to grow and spread. During fuels treatment planning, consideration is given to minimize invasive species from being introduced or spreading. For more information go to UC Cooperative Extension and review the Invasive Species support services at: <http://ucanr.org/sites/socalinvasives/>.

TREE MORTALITY AND FOREST PESTS

The goldspotted oak borer (GSOB) is a buprestid beetle which is native to oak forests of Southeastern Arizona. A closely related species (*Agrilus coxalis*), almost identical in appearance, is found in Central Mexico and Northern Guatemala. Since 2002, GSOB has contributed to the mortality of more than 80,000 trees over approximately 1,900 square miles, and this infested area continues to increase as the GSOB population grows and spreads. In its native range, GSOB is not a pest. This may be due to efficient population control by natural enemies and natural levels of resistance by oak species that have co-evolved with GSOB.

GSOB was first detected in San Diego County, California in 2004 by the California Department of Food and Agriculture during a survey for exotic woodborers. Four years later (2008), it was found attacking three species of

oak in the Cleveland National Forest in San Diego county: coast live oak (*Quercus agrifolia*), canyon live oak (*Q. chrysolepis*), and California black oak (*Q. kelloggii*).

Oak trees are classified into three categories which include white oaks, red oaks and intermediate oaks. These categories characterize three evolutionary lineages in *Quercus*, and are separated by their types of leaves, acorns, bark and wood. For example, white oaks have light grey or brown bark, while red oaks have dark grey, blackish or brown bark. White oaks also have light brown or yellowish wood while red oaks have reddish wood. Intermediate oaks are typically transitional, having intermediate qualities, or those more like either the white or red oaks. GSOB seems to prefer red oaks, although it will occasionally feed on intermediate oaks, and almost never on white oaks.

Although elevated levels of oak mortality had been aerially mapped by the USDA Forest Service in the Cleveland National Forest since 2002, it was not known that GSOB was the cause of such mortality until 2008 when it was officially confirmed as the primary mortality agent. The general belief until this time was that drought was the main contributing factor to the loss of so many oaks.

In late winter 2012, attention was drawn to a new insect/pathogen complex in Southern California as a result of damage to several backyard avocado trees in residential neighborhoods and a commercial avocado grove in Los Angeles County. The insect/pathogen complex is now known to be found over a wide area including most of Los Angeles County and parts of Orange County. Smaller outbreaks are found in San Bernardino and Riverside counties. An outbreak discovered in late 2013 in San Diego County was later determined to be a second species of insect, the Kuroshio shot hole borer (California Forest Pest Council 2015). This outbreak is 60 miles from the nearest outbreak, and indications are that the presence in San Diego is the result of a separate introduction, not spread from Los Angeles.

The original disease is caused by a new, previously undescribed fungus – *Fusarium euwallacea* – that forms a symbiotic relationship with the beetle. The beetles transport the fungus; in turn, the beetle larvae live in galleries within the tree and feed on the fungus. The two beetles – the polyphagous shot hole borer (PSHB) and Kuroshio shot hole borers (KSHB) – are morphologically very similar to other ambrosia beetles called the Tea Shot Hole Borer. In November 2018, scientists distinguished four species in the *Euwallacea fornicatus* species complex of ambrosia beetles from Asia. The two beetles introduced to California beetles are among these newly described species. The PSHB has been causing damage to commercial avocado orchards in Israel since 2009. The PSHB is native to Vietnam (California Forest Pest Council 2015). It has been in California since at least 2003, when it was found on some black locust.

Studies at the Los Angeles County Arboretum and Huntington Library, Arts Collections, and Botanical Gardens have identified more than 200 species of tree, shrub, or vine that are attacked by the PSHB; these plants are in 58 plant families from every continent except Antarctica. More recent studies have found the beetle in more than 300 species. The *Fusarium* fungus was detected in 54% of these trees – 113 species. Among the trees attacked by the PSHB are 11 species native to the southern California; 13 agriculturally important trees; and 53 species widely used in urban plantings. Analysis of a typical metropolitan area's tree survey indicates that these latter constitute more than half of all trees planted in urban areas of southern California.



Vegetation management projects are intended to minimize wildland fire impacts, especially near community areas. The cost and losses from wildland fires far exceeds the cost of the vegetation management and fuels treatment projects. Nevertheless, the environmental review process provides agencies and the public with the information regarding these projects to ensure the project complies with various environmental regulations.

FUELS MANAGEMENT IN THE WUI

Fires in the WUI spread through both vegetative and structural fuels. These fires can originate in either fuel type but usually begin in the wildland fuels of natural or manmade causes. At its core, the WUI fire problem is a structure ignition problem and the best approach to reducing the severity of the problem is to reduce the potential for structure ignition. The cause of the initial structure ignitions in a WUI community is predominately due to exposure to heat from flames or firebrands generated by a wildfire. Once structures and residential vegetation are burning, they too have the potential to contribute significantly to continued fire spread through the WUI community.

Methods for reducing the risk of a WUI community to wildland fire can be categorized as being focused, to a first approximation, on either the wildland fuels or residential fuels. The former is typically the responsibility of land management agencies such as CAL FIRE or the U.S. Forest Service, and the latter is that of homeowners who are obligated under California Public Resource Code (PRC 4291) to reduce fuel loading within 100 feet of the habitable structure.

To address the fuel conditions throughout SRA, projects conducted under this approach are organized into the following general categories or project types:

- Wildland-Urban Interface
- Fuel Breaks
- Ecological Restoration

Projects implemented under the WUI designation take place outside of the 100 feet defensible space requirements under PRC 4291, and within the outer edge of the defined WUI area. These project focus on directly protecting communities and assets at risk from potential damage from wildfire's originating in the adjacent wildlands as well as protecting the wildlands from fires transitioning to the wildlands from human infrastructure by modifying the fuels. Projects conducted in the designated WUI include all treatment types to achieve a reduced risk the WUI.

Projects implemented under the Fuel Break designation consist of converting the vegetation along strategically located areas for fire control. The wildland fuels in San Diego County occur largely in mountainous terrain, which adds greatly to the problem of controlling wildfires. Typical fuel break locations include ridgelines, along roads, or in other favorable topographic situations. Fuel breaks can provide safe access for quick staffing of fire control lines. Low-volume fuels, especially flammable grass, can be fired out quickly to widen a fireline under conditions where backfiring would be impossible in heavy fuels having high heat output. Aerial attack can also be used effectively in conjunction with fuel breaks to contain the lateral spread of an advancing wildfire.

Projects implemented under the Ecological Restoration designation attempt to restore the fire resiliency associated with many of the fire-adapted plant communities by renewing degraded, damaged, or destroyed ecosystems and habitats in the environment through active intervention. The conceptual basis is that for fire-adapted ecosystems, much of their ecological structure and processes are driven by fire, and the disruption of fire regimes leads to changes in plant composition and structure, uncharacteristic fire behavior and other disturbance agents (pests), altered hydrologic processes, and increased smoke production. Ecological Restoration projects occur outside of the WUI in areas that have departed from the natural fire regime.

EVACUATION CORRIDORS

SB99 and SB901 were both past to assist in efforts to make WUI communities safer and more resilient. SB99, The Planning and Zoning Law requires the legislative body of a city or county to adopt a comprehensive, long-term general plan that includes various elements, including a housing element and a safety element for the protection of the community from unreasonable risks associated with the effects of various geologic and seismic hazards, flooding, and wildfires. Existing law requires the safety element to address, among other things, evacuation routes related to identified fire and geologic hazards. Existing law requires the housing element to be revised according to a specific schedule. Existing law requires the planning agency to review and, if necessary, revise the safety element upon each revision of the housing element or local hazard mitigation plan, but not less than once every 8 years, to identify new information relating to flood and fire hazards and climate adaptation and resiliency strategies applicable to the city or county that was not available during the previous revision of the safety element. SB 901 is a comprehensive plan of action for forest management and wildfire mitigation and suppression across the state in multiple sectors. With respect to utility infrastructure-related wildfire risks, SB 901 requires electrical corporations to submit WMPs each year.

SECTION V - PREFIRE MANAGEMENT TACTICS

BATTALION PREFIRE PLANS

CAL FIRE's fire protection objective states that a system of basic fire protection will be provided so that damages to life, property and natural resources will be held at or below a level acceptable within social, political and economic constraints. Board of Forestry and Fire Protection designates in the Fire Plan (2018) that CAL FIRE will strive to contain 95% of all unwanted fires at 10 acres or less (Fire Operations Manual, the Fire Protection Objective, Section 7001.2 October 2015).

The San Diego Unit management intends to support the Fire Plan and make it successful. With the limited availability of funds and shortages of crews, creative ways to accomplish fuel reduction projects remains a top priority. For example, working with grant writers and stakeholders can secure funds to implement projects. The Unit will also focus on the maintenance of completed projects; this step will allow us to have the strategic benefits of the projects for years to come. Fire Control Road maintenance will be prioritized, and a rotation schedule developed. We will continue to collect, analyze, and prepare data to assess communities at risk for those in need of fuel reduction or other projects. Continue our participation with the local fire safe councils. The San Diego Unit strives to educate the public on fire prevention and incorporating fire resistant landscaping and construction to their property, as well as hazardous fuel reduction to keep their lives, homes, property and natural resources safe from catastrophic wildfires. We intend to build on our commitment to preplan for emergency situations and to enhance our critical infrastructure protection plan in high-risk areas.



The following information is provided by the field Battalion Chief regarding pre-fire/resource management activities associated with the Unit Fire Plan. Field Battalion Chiefs provide the direction and leadership to propose and implement projects for life, community and natural resources protection. Field Battalion Chiefs are an integral component at community level. The following Battalion objectives have been developed based on the cohesive fire strategies. We will measure success through monitoring: treated acres, the number of completed defensible space inspections and the number of public education contacts.

- Foster fire prevention and safety through community education and training.
- Promote structural hardening and defensible space techniques to improve structure survivability.
- Establish and maintain strategic fuel breaks and reduced fuel zones to improve community defense.
- Maintain dependable ingress and egress routes.

BATTALION 1 – RED MOUNTAIN

OVERVIEW

Battalion 1 is located in the northwest corner of San Diego County and consists of three State funded fire stations, , and three District funded fire stations. Rainbow Fire Center is also located within Battalion 1. The Battalion is bordered by Fallbrook, Vista, San Marcos and Camp Pendleton Marine Corps Base to the West, Riverside County

to the North, Pala Indian Reservation, Valley Center and the Cleveland National Forest (Palomar District) to the East, and the City of Escondido to the South. The Battalion size is approximately 336,833 acres or 526 square miles.

FUELS SUMMARY

The following is a fuels summary list:

- Heavy mixed chaparral intermixed with Grass-Oak woodlands
- Annual Grass
- Homes are interspersed within fuels
- Heavy chaparral on slopes with heavy riparian along drainages and creek bottoms
- Heavy, contiguous, old age class chaparral and coastal sage scrub

FIRE BEHAVIOR SUMMARY

Fires may burn with extreme fire behavior including dangerous to extreme rates of spread, long range spotting, and high energy outputs. Structural loss is likely for exposed perimeter homes, especially those above chimneys and canyons. 10% of homes have wood shingled roofs or siding. There are steep, rugged hills and canyons, with homes perched on a high plateau and on ridgelines.

BATTALION PREFIRE GOALS

The following objectives have been developed based on the cohesive fire strategies and stakeholder input and are intended to facilitate multi-agency cooperation for fire protection planning efforts in San Diego County: We will measure success through monitoring, treated acres, the number of completed defensible space inspections and the number of public education contacts.

FOSTER FIRE PREVENTION AND SAFETY THROUGH COMMUNITY EDUCATION AND TRAINING.

- Ensure effective communication and coordination with the Unit Communication Bureau
- Participate in Public Events to further community education
- Continue Ready Set Go and Why 100 education programs

PROMOTE STRUCTURAL HARDENING AND DEFENSIBLE SPACE TECHNIQUES TO IMPROVE STRUCTURE SURVIVABILITY.

- PRC 4291 Inspections – Battalion goal of 8,000 inspections
- Evaluate high risk areas based on environmental and infrastructure conditions, and use inspection compliance history to identify areas of focused inspections in the Battalion
- Ensure accurate collection of LE-100 data, utilizing the departments issued electronic platform
- Identify funding sources and opportunities for enforcement of regulations

ESTABLISH STRATEGIC FUEL BREAKS AND REDUCED FUEL ZONES TO IMPROVE COMMUNITY DEFENSE.

- Regularly inspect the Tenaja, Roblar, Rainbow, and Santa Margarita Truck Trails to ensure back country access roads are maintained and brushed to support wildland fire access
- Maintain Welkview Fuel Break, Moosa Fuel Break, Pendleton Fuel Break

- Continually evaluate for opportunities of additional Fuel treatment projects

MAINTAIN DEPENDABLE INGRESS AND EGRESS ROUTES.

- Maintain evacuation corridors utilizing the P.A.C.E. concept (Primary, Alternate, Contingency, and Emergency)
- 20-foot roadway clearance: N. Center City Parkway, Valley Center Road, Old Castle Road, Deer Springs Road, Cougar Pass Road, Camino Del Rey, Old Highway 395
- Provide Wildland interface preparation training
- Work with Fire Safe Councils on CWPP and community education programs

STRATEGIC FUEL BREAKS AND PRIORITY PREFIRE MAINTENANCE PROJECTS

Battalion	Project Name	Acres Treated	Acres
1	Welkview Fuel Break	Fuel Reduction	64
1	Roblar Truck Trail	Fuel Reduction	9
1	Tenaja Truck Trail	Fuel Reduction	13
1	Rainbow Truck Trail	Fuel Reduction	9
1	Moosa Fuel Break	Fuel Break	86

Truck Trails			
Battalion	Map Labels	Truck Trails	Length in Miles
1	2	Rainbow	2.77
1	4	Piett	2.30
1	5	Santa Margarita	5.20
1	6	Harris Spur	5.14
1	7	Red Mountain Lookout	2.05
1	12	Red Mountain	4.21
1	13	Magee	5.06
1	102	Roblar	2.28
1	113	Tenaja	4.63
1	0	Welk View	5.36

Alpine, La Mesa, Lemon Grove, Santee, Lakeside, and Northern San Diego City. The Battalion is approximately 363,989 acres or 568 square miles.

FUELS SUMMARY

The following is a fuels summary list:

- Chaparral and coastal sage scrub
- Significant oak tree dieback. Heavy riparian along creek bottom
- Good clearance around homes off Victoria (Crown Hills tract), North Alpine, CA
- Generally poor clearance around most homes in Peutz Valley, West of Alpine, CA

FIRE BEHAVIOR SUMMARY

Fires will burn with extreme fire behavior including long flame lengths, high rates of spread and energy outputs were scene during the West Fire that consumed 505 acres and over 20 structures in July 2018 and again during the 2019 Sloane which consumed 200 acres. The Sloane Fire ran into and was stopped by the Sycuan Truck Trail which highlights Fuel Reduction within the battalion. The wildland urban interface within Battalion 2 is extremely prevalent with numerous communities and residents that have potential to be impacted. Due to the diverse topography and decadence fuel loading, all initial attack fires in the Battalion 2 have the potential for extended attack incidents.



BATTALION PREFIRE GOALS

The following objectives have been developed based on stakeholder input and are intended to facilitate multi-agency cooperation for fire protection planning efforts in San Diego County. We will measure success through monitoring: treated acres, the number of completed defensible space inspections and the number of public education contacts.

FOSTER FIRE PREVENTION AND SAFETY THROUGH COMMUNITY EDUCATION AND TRAINING.

- Ensure effective communication and coordination with the Unit Communication Bureau
- Provide fire preparedness programs to students K-12
- Participate in Public Events to further community education

- Continue Ready Set Go and Why 100 education program

PROMOTE STRUCTURAL HARDENING AND DEFENSIBLE SPACE TECHNIQUES TO IMPROVE STRUCTURE SURVIVABILITY.

- PRC 4291 Inspections – Battalion goal of 4,100 inspections
- Engineering and structural ignitability education and information
- Ensure accurate collection of LE-100 data, utilizing the departments issued electronic platform
- Identify funding sources and opportunities for enforcement of regulations

ESTABLISH STRATEGIC FUEL BREAKS AND REDUCED FUEL ZONES TO IMPROVE COMMUNITY DEFENSE.

- Regularly inspect Valley View, Sycuan, Skeleton Flats, Suncrest, Sloane Truck Trails to ensure back country access roads are maintained and brushed to support wildland fire access
- Maintain Crest Community Fuel Break Fuel Break
- Continually evaluate for opportunities of additional Fuel treatment projects

MAINTAIN DEPENDABLE INGRESS AND EGRESS ROUTES.

- Maintain evacuation corridors utilizing the P.A.C.E. concept (Primary, Alternate, Contingency, and Emergency)
- 20 foot Roadway Clearance: Mountain View Road, Dehesa Road
- Provide Wildland interface preparation training
- Work with Fire Safe Councils on CWPP and community education programs
- Strategic Fuel Breaks and Priority Prefire Maintenance Projects

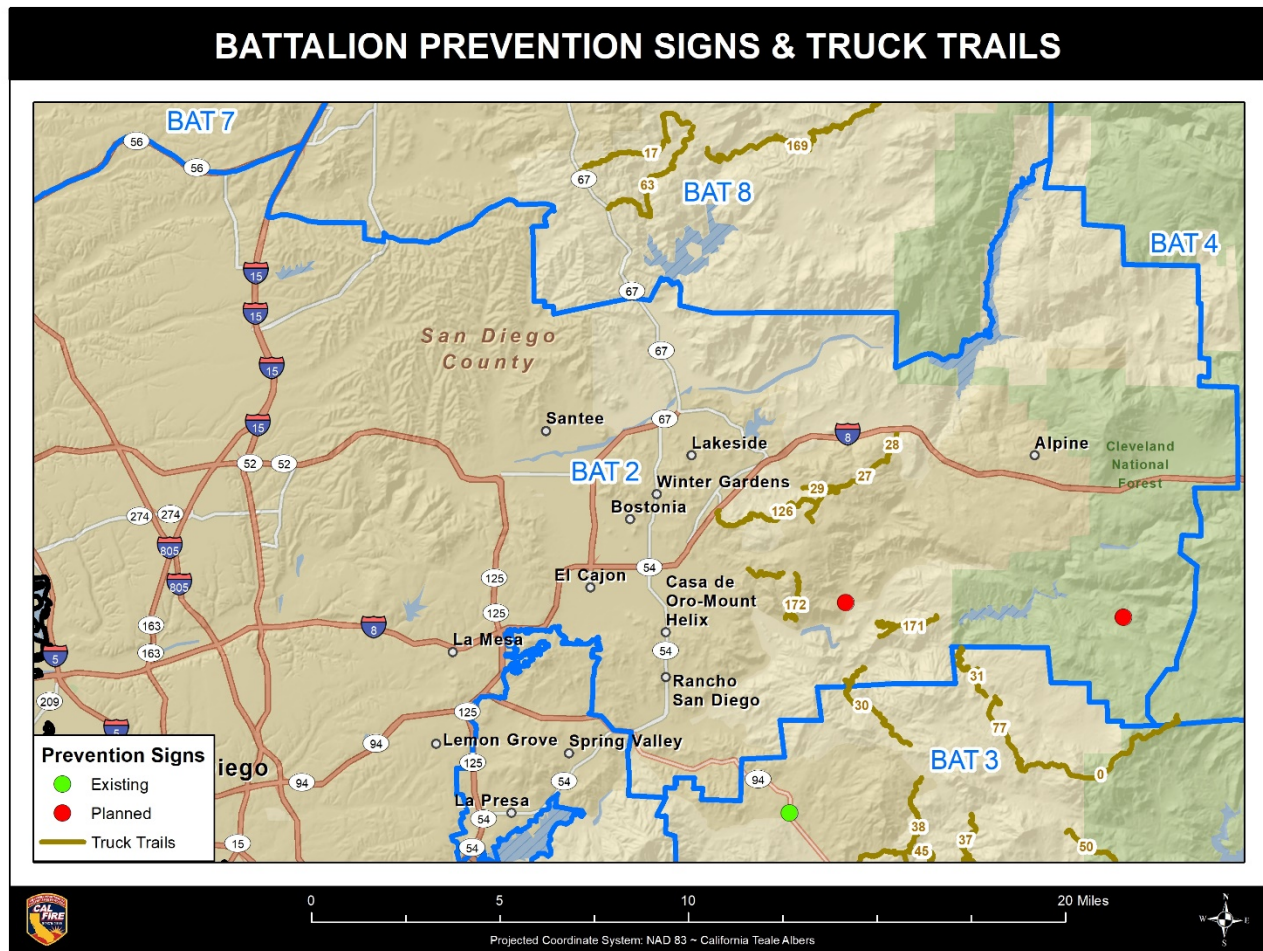
STRATEGIC FUEL BREAKS AND PRIORITY PREFIRE MAINTENANCE PROJECTS

Fuel Breaks			
Battalion	Project Name	Type	Acres Treated
2	Alpine Community Defense	Fuel Break	65
2	Suncrest Truck Trail	Fuel Reduction	4
2	Skeleton Flats Truck Trail	Fuel Reduction	9
2	Valley View Truck Trail	Fuel Reduction	21
2	Crest Fuel Break	Fuel Break	160

Truck Trails			
Battalion	Map Labels	Truck Trails	Length in Miles
2	126	Valley View	4.63

2	27	McClain B	2.05
2	28	McClain A	1.56
2	29	Cornelius	1.10
2	171	Sycuan	1.83
2	172	Sycuan Spur	1.14
2	172	Skeleton Flats	1.85
2	0	Suncrest	1.31

Prevention Signs			
Battalion	Maintenance	Sign Location	Status
2	Station 20	Japatul Road X Hidden Glen Road	Planned
2	Station 21	Dehesa Road X Harbison Canyon Road	Planned



BATTALION 3 – DULZURA

OVERVIEW

Battalion 3 of the San Diego Unit is located in the south-central portion of San Diego County, encompassing the community of Jamul on the western border, east to the community of Potrero, north to the southern border of the Cleveland National Forest, including the communities of Deerhorn Valley and Lawson Valley, south to the Mexican Border. Numerous county highways and one state highway traverse the battalion, serving the rural communities identified above as well as the additional communities of Dulzura, Barrett Junction, and Tecate. Battalion boundaries encompass approximately 172,276 acres or 269 square miles.

FUELS SUMMARY

The following is a fuels summary list:

- Mixed chaparral and coastal sage, grass and oak woodlands
- Heavy old age class chaparral in Coyote Hollar area and on Hauser Mountain
- Only modest post-fire recovery of chaparral due to prolonged drought
- Mixed chaparral in islands missed by 2007 fire

FIRE BEHAVIOR SUMMARY

With critical fire weather, fires will burn with extreme behavior, high rates of spread, and long range spotting. This is an historic corridor for fire and high winds. High risk for civilian entrapment and structural loss. Area is general location of 13 firefighter and numerous civilian fatalities: (a)1943 Hauser Creek Fire-11 Marines (+72 burn injuries) due to wind reversal in ebbing Santa Ana, (b)1973 Bell Valley Fire-1 firefighter during flare-up and run to escape, (c)1948 Barrett Dam Fire-1 firefighter during flare-up and crew separation, (d)2007 Harris Fire-5 immigrants killed off Barrett-Smith Rd. CAL FIRE engine burned over off Hwy 188, X: Emery Lane with 1 civilian fatality.

BATTALION PREFIRE GOALS

The following objectives have been developed based on stakeholder input and are intended to facilitate multi-agency cooperation for fire protection planning efforts in San Diego County. We will measure success through monitoring: treated acres, the number of completed defensible space inspections and the number of public education contacts.

FOSTER FIRE PREVENTION AND SAFETY THROUGH COMMUNITY EDUCATION AND TRAINING.

- Ensure effective communication and coordination with the Unit Communication Bureau
- Provide fire preparedness programs to students K-12
- Participate in Public Events to further community education
- Continue Ready Set Go and Why 100 education program

PROMOTE STRUCTURAL HARDENING AND DEFENSIBLE SPACE TECHNIQUES TO IMPROVE STRUCTURE SURVIVABILITY.

- PRC 4291 Inspections – Battalion goal of 2,600 inspections. Evaluate high risk areas based on environmental and infrastructure conditions
- Aggressive law enforcement (citation) for burning without a permit

ESTABLISH STRATEGIC FUEL BREAKS AND REDUCED FUEL ZONES TO IMPROVE COMMUNITY DEFENSE.

- Regularly inspect the Wisecarver, Daley Ranch, Honey Springs, Lyons/Lawson, and Barrett Truck Trails to ensure back country access roads are maintained and brushed to support wildland fire access
- Maintain Otay Fuel Break, Potrero Fuel Break, Tecate Fuel Break, Wisecarver Fuel Break, International Fuel Break
- Implement vegetation management treatments and ignition reduction projects in priority WUI areas: Dulzura, Potrero, Barrett Junction
- Maintain evacuation corridors utilizing the P.A.C.E. concept (Primary, Alternate, Contingency, and Emergency)

MAINTAIN DEPENDABLE INGRESS AND EGRESS ROUTES.

- Maintain evacuation corridors utilizing the P.A.C.E. concept (Primary, Alternate, Contingency, and Emergency)
- 20-foot Roadway Clearance: Lawson Valley Road, Emry Road, Potrero Valley Road, Round Potrero Road, Barrett Lake Road, Harris Ranch Road
- Provide Wildland interface preparation training
- Work with Fire Safe Councils on CWPP and community education programs

STRATEGIC FUEL BREAKS AND PRIORITY PREFIRE MAINTENANCE PROJECTS

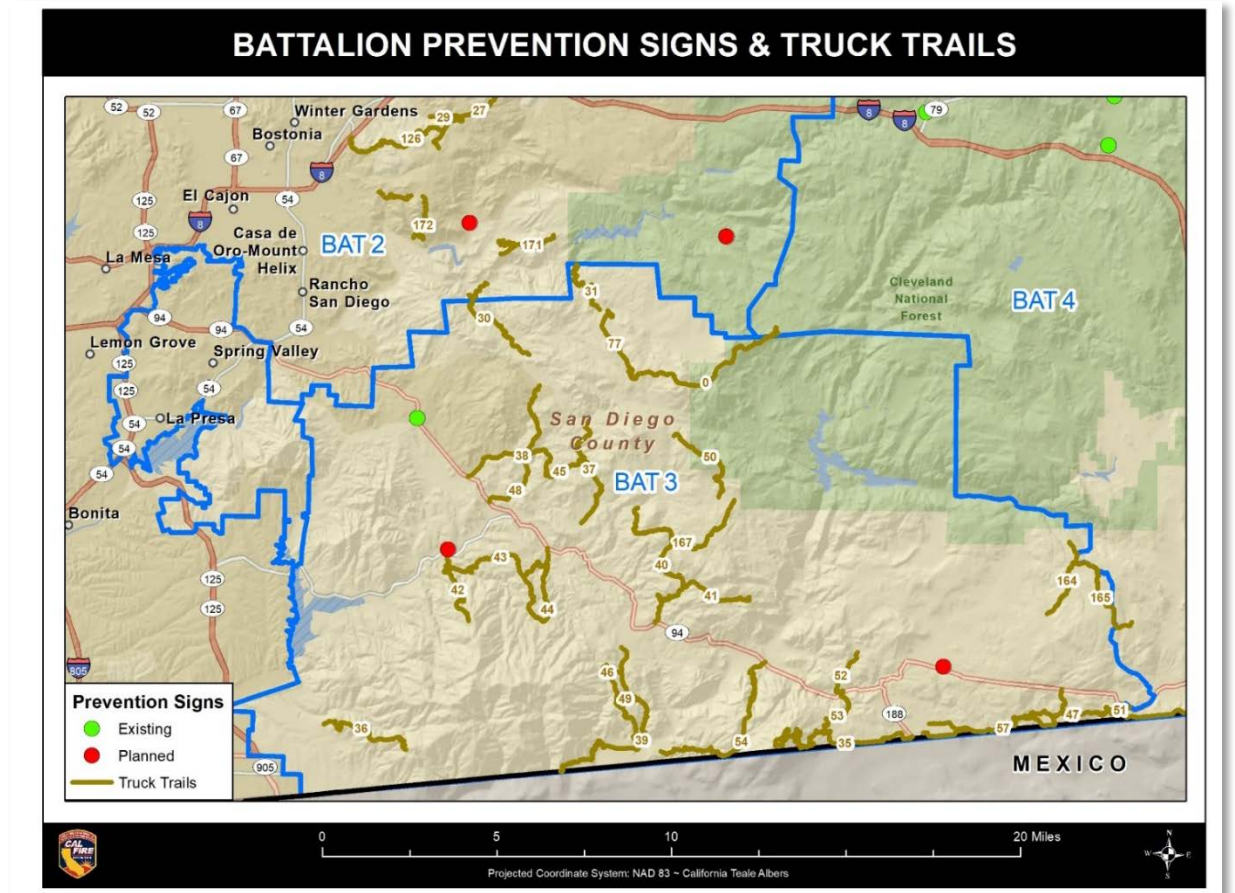
Fuel Breaks			
Battalion	Project Name	Type	Acres Treated
3	Lucky Six Fuel Break	Fuel Break	68
3	Honey Springs Truck Trail	Fuel Reduction	17
3	Round Potrero Fuel Break	Fuel Reduction	76
3	Lyons-Lawson Truck Trail	Fuel Reduction	9
3	Barrett Truck Trail	Fuel Reduction	38
3	Wisecarver Fuel Break	Fuel Break	33
3	Remote Watertank Maintenance Project	Water Tank Maintenance	N/A

Truck Trails			
Battalion	Map Labels	Truck Trails	Length in Miles
3	54	Barrett	7.12
3	57	Bell Valley	5.48
3	30	Beaver Hollow	4.08

3	31	Sloan Ranch	2.70
3	35	Tecate	7.91
3	36	Otay	3.69
3	37	Honey Springs	4.56
3	38	Daley Ranch	4.80
3	39	Marron Valley	7.33
3	40	Lucky Six	6.37
3	41	Skunk Hollow Spur	2.37
3	42	Minnewawa	2.98
3	43	Doghouse Spur (Lower Minnewawa)	5.01
3	44	Hubbard Spur	3.86
3	45	Honey Springs Spur	2.77
3	46	Mine Canyon	3.32
3	47	Border Road	10.78
3	48	Hollenbeck	2.25
3	49	Lupe Springs Spur	0.61
3	50	Barber Mountain	3.23
3	51	Scraper	0.58
3	52	Grapevine North	1.80
3	53	Grapevine South	1.82
3	77	Lyons-Lawson	3.17
3	164	Hauser Mountain West	2.64
3	165	Hauser Mountain East	3.44
3	167	Mother Grundy	5.01
3	0	Wisecarver	5.94

Prevention Signs			
Battalion	Maintenance	Sign Location	Status
3	Station 36	Highway 94 X Melody Road	Existing
3	Station 31	Highway 94 X Potrero Valley Road	Planned
3	Station 30	Otay Lakes Road X Otay Mountain Truck Trail	Planned
3	Station 32	Honey Springs X Lyons Valley Road	Proposed
3	Station 30	Honey Springs X Hwy 94 @ Hollenbeck Trailhead	Proposed

Fire Safe Councils		
Battalion	Fire Safe Councils	Status
3	Outer Jamul	Active
3	Dulzura / Barrett	Active
3	Jamul	Active
3	Potrero / Tecate	Active



BATTALION 4 - CAMPO

OVERVIEW

Battalion 4 is located in the extreme southeastern corner of San Diego County. It is bordered by Mexico to the south, Imperial County to the east, and USFS land to the north. The communities of Pine Valley, Campo, Boulevard, and Jacumba fall within Battalion 4's Direct Protection Area with a size totaling approximately 458,312 acres or 716 square miles.

FUELS SUMMARY

The following is a fuels summary list:

- Heavy, contiguous, old age class chaparral with oak and pine mix
- Significant oak tree and pine dieback due to insect infestation
- Mixed chaparral and coastal sage, grass and oak woodlands in the lowlands

FIRE BEHAVIOR SUMMARY

Fires may burn with extreme fire behavior, including high rates of spread, long range spotting, and high energy outputs during Red Flag fire weather conditions. Beware high fire indices onshore wind days. Watch for development of extreme fire behavior in old age fuels, and deep in canyons. Spotting up to two miles ahead when large smoke columns are present. Flame lengths of 40+ feet possible in heavy chaparral. Expect geographic turbulence during high winds. High winds occur during Santa Ana episodes and during some afternoons of onshore wind days.

BATTALION PREFIRE GOALS

The following objectives have been developed based on stakeholder input and are intended to facilitate multi-agency cooperation for fire protection planning efforts in San Diego County. We will measure success through monitoring: treated acres, the number of completed defensible space inspections and the number of public education contacts.

FOSTER FIRE PREVENTION AND SAFETY THROUGH COMMUNITY EDUCATION AND TRAINING.

- Ensure effective communication and coordination with the Unit Communication Bureau
- Provide fire preparedness programs to students K-12
- Participate in Public Events to further community education
- Continue Ready Set Go and Why 100 education programs

PROMOTE STRUCTURAL HARDENING AND DEFENSIBLE SPACE TECHNIQUES TO IMPROVE STRUCTURE SURVIVABILITY.

- PRC 4291 Inspections – Battalion goal of 4,000 inspections
- Engineering and structural ignitability education and information
- Ensure accurate collection of LE-100 data, utilizing the departments issued electronic platform
- Identify funding sources and opportunities for enforcement of regulations

ESTABLISH STRATEGIC FUEL BREAKS AND REDUCED FUEL ZONES TO IMPROVE COMMUNITY DEFENSE.

- Regularly inspect Shockey Truck Trail to ensure back country access roads are maintained and brushed to support wildland fire access
- Maintain Lake Morena Fuel Break, Tierra Del Sol Fuel Break, Camp Locket Fuel Break, Cameron Fuel Break, International Fuel Break, Pine Valley Fuel Break, and Tule Jim Fuel Break

- Implement vegetation management treatments and ignition reduction projects in priority WUI areas: Guatay, Pine Valley, Lake Morena, Campo, and Boulevard

MAINTAIN DEPENDABLE INGRESS AND EGRESS ROUTES.

- Maintain evacuation corridors utilizing the P.A.C.E. concept (Primary, Alternate, Contingency, and Emergency)
- 20-foot Roadway Clearance: Pine Valley Road, Riverside Drive, Boulder Creek Road, Corte Madera Road
- Provide Wildland interface preparation training
- Work with Fire Safe Councils on CWPP and community education programs
- Strategic Fuel Breaks and Priority Prefire Maintenance Projects

STRATEGIC FUEL BREAKS AND PRIORITY PREFIRE MAINTENANCE PROJECTS

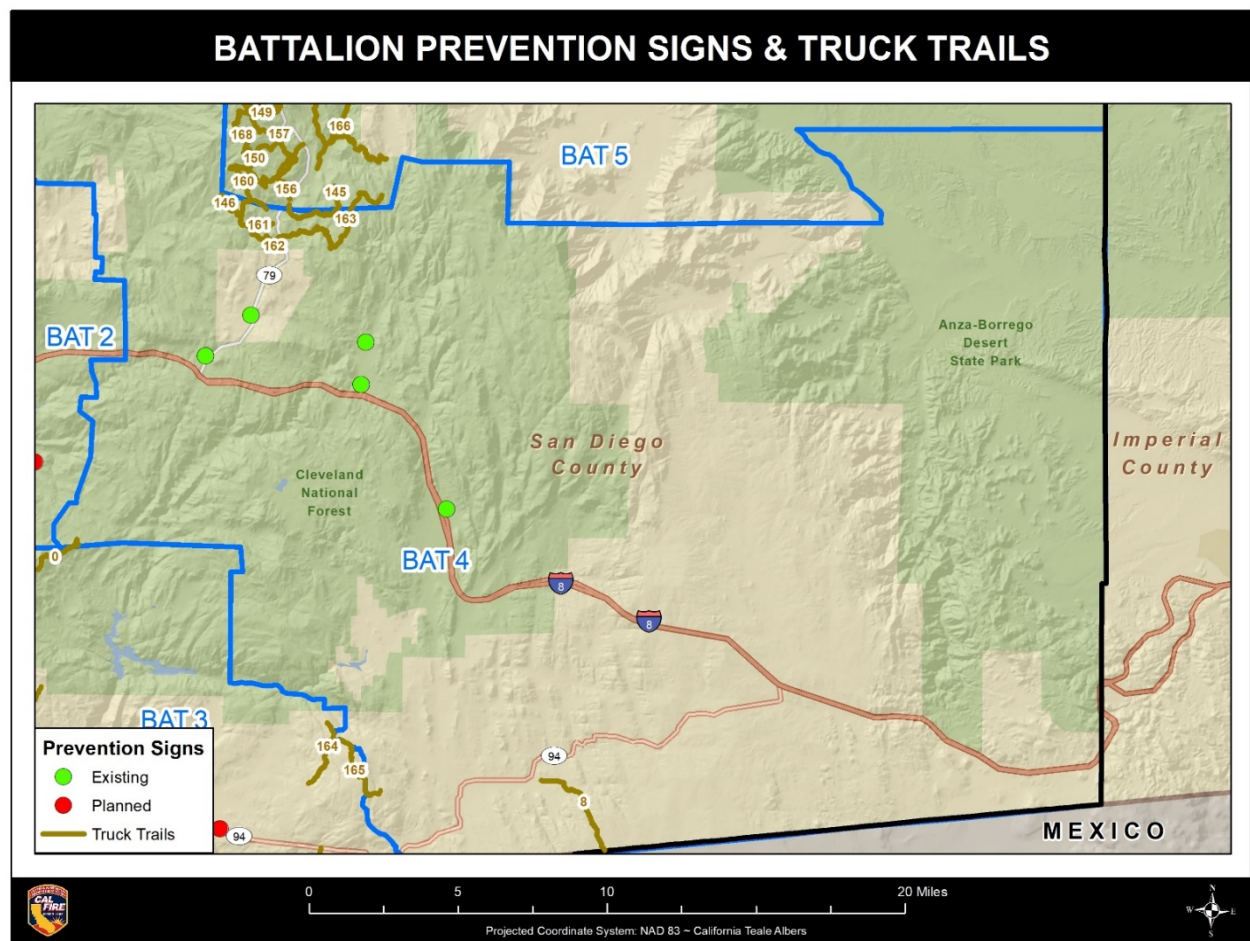
Fuel Breaks			
Battalion	Project Name	Type	Acres Treated
4	McCain Valley Rx Fire Training	Rx Burn	400
4	Corte Madera VMP	Rx Burn	427
4	Tule Jim Lane Fuel Break	Fuel Break	39
4	Tierra Del Sol Fuel Break	Fuel Break	89
4	Calexico Lodge Fuel Reduction	Fuel Reduction	14
4	Cameron Extension Fuel Break	Fuel Break	11
4	Remote Watertank Maintenance Project	Water Tank Maintenance	N/A

Truck Trails			
Battalion	Map Labels	Truck Trails	Length in Miles
4	8	Shockey	3.80

Prevention Signs			
Battalion	Maintenance	Sign Location	Status
4	Station 45	Wildwood Glen Lane X Highway 79	Existing
4	Station 45	Highway 79 X Viejas Boulevard	Existing
4	Station 44	Old Highway 80 X Pine Creek Road	Existing
4	Station 44	Old Highway 80 X Pine Valley Road	Existing

4	Station 42	Old Highway 80 X Buckman Springs Road	Existing
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Fire Safe Councils		
Battalion	Fire Safe Councils	Status
4	Mt Laguna	Active
4	Pine Valley	Active
4	Real East County	Active
4	Campo / Lake Morena	Active
4	Descanso	Active



BATTALION 5 - JULIAN

OVERVIEW

Battalion 5 is the largest single battalion in San Diego County and is bounded by Imperial County to the east and Riverside County to the North. It also contains a unique landscape ranging from deserts in the far eastern portion to mountains in the central. The fuels range from predominantly grasses in the desert at elevations near sea level to hardwood timber at elevations above 6000 feet. Temperatures range from mid-teens in the winter with snow in the higher elevations to 120 degrees in the desert portions during the summer. The Battalion is approximately 816,713 acres or 176 square miles.

FUELS SUMMARY

The following is a fuels summary list:

- Heavy mixed chaparral intermixed with timber in higher elevations
- Grass-Oak woodlands on north end S/O Hwy. 78
- Homes are interspersed within fuels
- Heavy chaparral on slopes with heavy riparian along drainages
- Pines mixed with chaparral on ridge tops. Grass lands on valley floor
- Fuels are drought stressed, oak and pine die-back is present

FIRE BEHAVIOR SUMMARY

This area includes one of the heaviest fuel beds in San Diego County. A historical wildfire corridor is due-west in the San Diego River drainage. The area experiences strong Santa Ana winds in this drainage. Under critical fire weather, fires will burn w/ extreme fire behavior, explosive fire growth/high spread rates, heavy spotting, & crowning in timber. Established fires may develop strong plume dominated/fuel driven characteristics in the absence of wind domination. In the past, I.A. fires have immediately involved structures. Periods of returning onshore winds following a Santa Ana event can pose high risks and has historically contributed to firefighter deaths and large structural loss.

BATTALION PREFIRE GOALS

The following objectives have been developed based on the cohesive fire strategies. We will measure success through monitoring: treated acres, the number of completed defensible space inspections and the number of public education contacts.

FOSTER FIRE PREVENTION AND SAFETY THROUGH COMMUNITY EDUCATION AND TRAINING.

- Ensure effective communication and coordination with the Unit Communication Bureau
- Provide fire preparedness programs to students K-12
- Participate in Public Events to further community education
- Continue Ready Set Go and Why 100 education program

PROMOTE STRUCTURAL HARDENING AND DEFENSIBLE SPACE TECHNIQUES TO IMPROVE STRUCTURE SURVIVABILITY.

- PRC 4291 Inspections – Battalion goal of 3,200 inspections
- Engineering and structural ignitability education and information

- Ensure accurate collection of LE-100 data, utilizing the departments issued electronic platform
- Identify funding sources and opportunities for enforcement of regulations

ESTABLISH STRATEGIC FUEL BREAKS AND REDUCED FUEL ZONES TO IMPROVE COMMUNITY DEFENSE.

- Regularly inspect Mason Valley, Volcan, Rodriquez, Chariot, Cooper Cienega, Beauty Mountain, Indian Flats, Lost Valley, and Puerta La Cruz Truck Trails to ensure back country access roads are maintained and brushed to support wildland fire access
- Maintain Sunrise Fuel Break
- Implement vegetation management treatments and ignition reduction projects in priority WUI areas: Julian, Whispering Pines, Harrison Park, Cuyamaca Woods, and Chiwawa Valley
- Continually evaluate for opportunities of additional Fuel treatment projects

MAINTAIN DEPENDABLE INGRESS AND EGRESS ROUTES.

- Maintain evacuation corridors utilizing the P.A.C.E. concept (Primary, Alternate, Contingency, and Emergency)
- 20-foot Roadway Clearance: Pine Hills Road, Farmers Road, East Grade Road, Wynola Road, Engineers Road, Boulder Creek Road
- Provide Wildland interface preparation training
- Work with Fire Safe Councils on CWPP and community education programs

STRATEGIC FUEL BREAKS AND PRIORITY PREFIRE MAINTENANCE PROJECTS

Fuel Breaks			
Battalion	Project Name	Type	Acres Treated
5	La Cima Roadside Brushing	Fuel Reduction	20
5	Sunrise Fuel Break	Fuel Break	47
5	Cuyamaca Peak Rx Burn	Rx Burn	86
5	Warner Springs Estates Fuel Break	Fuel Break	26
5	SRA Cuyamaca State Park Fuel Reduction	Fuel Reduction	8
5	SRA Harrison Park Fuel Reduction	Fuel Reduction	12
5	Remote Watertank Maintenance Project	Water Tank Maintenance	N/A

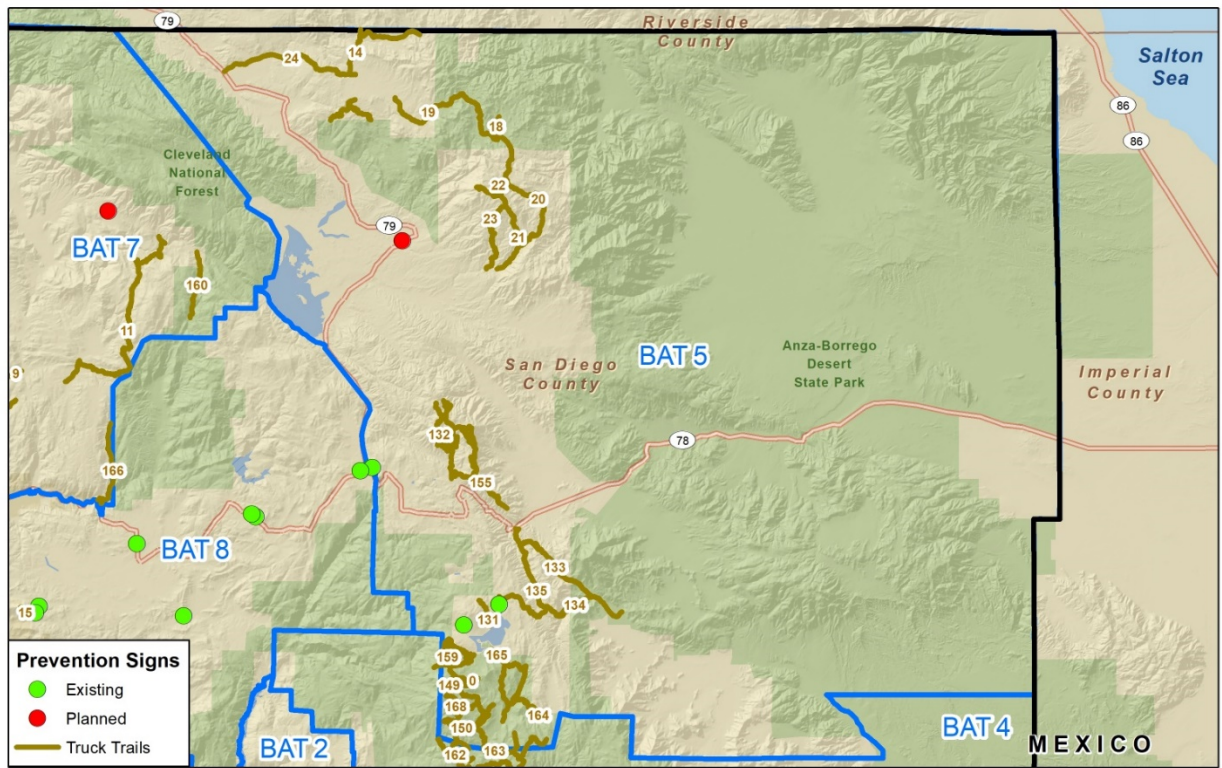
Truck Trails			
Battalion	Map Labels	Truck Trails	Length in Miles
5	131	North Peak	1.63
5	132	Volcan	18.87
5	133	Rodriquez	5.64

5	134	Mason Valley	9.39
5	135	Chariot	5.43
5	162	Indian Flats	1.95
5	163	Puerta La Cruz	2.30
5	14	Cooper Cienega	2.65
5	18	Lost Valley Spur #1	1.14
5	19	Lost Valley	9.26
5	20	Los Coyotes	10.73
5	21	Los Coyotes Spur #2	2.59
5	22	Los Coyotes Spur #3	1.24
5	23	Los Coyotes Spur #1	7.73
5	24	Beauty Mountain	11.40

Prevention Signs			
Battalion	Maintenance	Sign Location	Status
5	Station 50	Highway 79 X Engineers Road	Existing
5	Station 51	Highway 79 X Sunrise Highway	Existing
5	Station 52	Highway 79 X Warner Springs Station 52	Planned
5	Station 52	Highway 79 X Highway 78	Existing

Fire Safe Councils		
Battalion	Fire Safe Councils	Status
5	Julian Fire Safe Council	Active
5	Cuyamaca Woods Fire Safe Council	Active
5	Wynola Estates Fire Safe Council	Active
5	Harrison Park Fire Safe Council	Active
5	Greater Sunshine Summit Fire Safe Council	Active
5	Los Tules/Warner Springs Fire Safe Council	Active

BATTALION PREVENTION SIGNS & TRUCK TRAILS



BATTALION 7 - VALLEY CENTER

OVERVIEW

Battalion 7 is located in north central San Diego County. It is bordered to the north by Riverside County and the Cleveland National Forest (Palomar District), to the east by CAL FIRE Julian Battalion, to the west by CAL FIRE Red Mountain Battalion and the Deer Springs Fire Protection District, and to the south by the cities of Escondido and San Marcos. The Fox Fire Center is also located in Battalion 7. The Valley Center Battalion is unique in its orientation (SW to NE); this orientation lines up with northeast wind events (Santa Ana) which presents the potential for large fast moving fires. The Battalion is approximately 316,760 acres or 495 square miles.

FUELS SUMMARY

The following is a fuels summary list:

- Heavy, old chaparral & coastal sage scrub on slopes, heavy riparian along creeks
- Grass-oak woodland or agricultural on valley floor
- Higher elevation mixed conifer with intermixed chaparral

FIRE BEHAVIOR SUMMARY

This area includes one of the heaviest fuel beds in San Diego County. A historical wildfire corridor is due-west in the San Luis Rey River Drainage. The area experiences strong Santa Ana winds in this drainage. Under critical fire weather, fires will burn w/ extreme fire behavior, explosive fire growth/high spread rates, heavy spotting, and crowning in timber. Established fires may develop strong plume dominated/fuel driven characteristics in the absence of wind domination. In the past, I.A. fires have immediately involved structures. Periods of returning onshore winds following a Santa Ana event can pose high risks & has historically contributed to firefighter deaths and large structural loss.

BATTALION PREFIRE GOALS

The following objectives have been developed based on stakeholder input and are intended to facilitate multi-agency cooperation for fire protection planning efforts in San Diego County:

FOSTER FIRE PREVENTION AND SAFETY THROUGH COMMUNITY EDUCATION AND TRAINING.

- Ensure effective communication and coordination with the Unit Communication Bureau
- Provide fire preparedness programs to students K-12
- Participate in Public Events to further community education
- Continue Ready Set Go and Why 100 education program

PROMOTE STRUCTURAL HARDENING AND DEFENSIBLE SPACE TECHNIQUES TO IMPROVE STRUCTURE SURVIVABILITY.

- PRC 4291 Inspections – Battalion goal of 5,200 inspections.
- Identify operational/response planning needs (e.g., wildfire response plans, evacuation areas, evacuation routes, shelter locations, fire equipment staging areas, control objectives, significant environmental areas, etc.)

ESTABLISH STRATEGIC FUEL BREAKS AND REDUCED FUEL ZONES TO IMPROVE COMMUNITY DEFENSE.

- Regularly inspect Guejito, La Jolla, Von Sagren, Ridge Ranch Truck Trails to ensure back country access roads are maintained and brushed to support wildland fire access
- Implement vegetation management treatments and ignition reduction projects in priority WUI areas: Palomar, Rincon, and Pala

MAINTAIN DEPENDABLE INGRESS AND EGRESS ROUTES.

- Maintain evacuation corridors utilizing the P.A.C.E. concept (Primary, Alternate, Contingency, and Emergency)
- 20-foot Roadway Clearance: North Lake Wohlfod Road, Valley Center Road, Cole Grade Road, East Grade Road, Old Castle Road, South Grade Road
- Provide Wildland interface preparation training
- Work with Fire Safe Councils on CWPP and community education programs

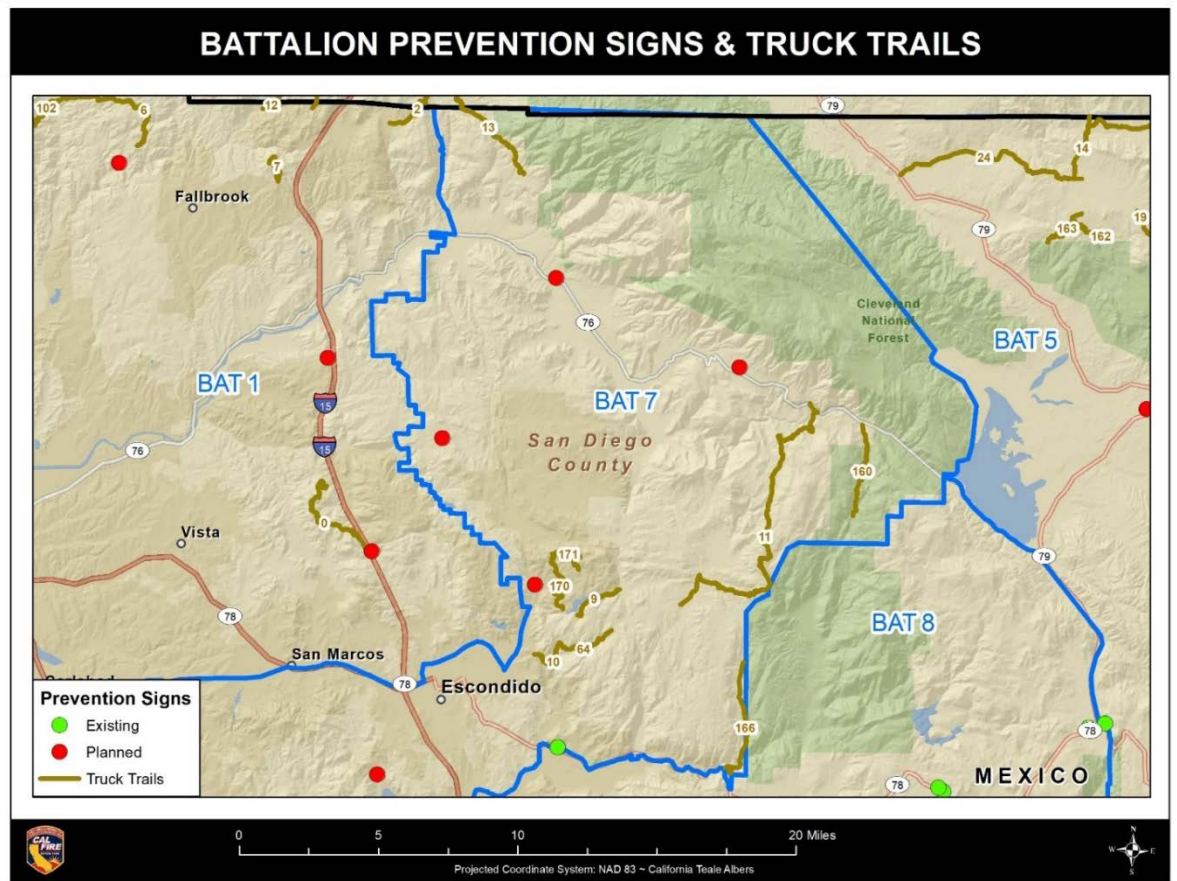
STRATEGIC FUEL BREAKS AND PRIORITY PREFIRE MAINTENANCE PROJECTS

Fuel Breaks			
Battalion	Project Name	Type	Acres Treated
7	SRA - Palomar Divide Fuel Break	Fuel Break	34
7	Orosco Truck Trail	Fuel Reduction	13
7	Von Sagren Truck Trail	Fuel Reduction	13
7	Lusardi Truck Trail	Fuel Reduction	17
7	Ridge Ranch Truck Trail	Fuel Reduction	9

Truck Trails			
Battalion	Map Labels	Truck Trails	Length in Miles
7	64	Guejito	4.80
7	9	Wohlford	2.15
7	10	Guejito	2.46
7	11	La Jolla	14.23
7	160	Lusardi	3.76
7	166	Orosco	5.06
7	170	Von Sagren	3.06
7	171	Ridge Ranch	2.01

Prevention Signs			
Battalion	Maintenance	Sign Location	Status
7	Station 77	Highway 78 X West Zoo Road	Existing
7	Station 77	Del Dios Highway X Date Lane	Planned
7	Station 71	Valley Center Road X Engelmann Road	Planned
7	Station 71	Old Castle Road X Old Castle Way	Planned
7	Station 70	Highway 76 X Adams Drive	Planned

Fire Safe Councils		
Battalion	Fire Safe Councils	Status
7	Palomar Mountain	Active
7	Valley Center	Active



BATTALION 8 - RAMONA

OVERVIEW

Battalion 8 is in the center of San Diego County. Battalion 8 is bordered by Julian and the Cuyamaca mountains to the east, the Barona Reservation, and Lakeside to the south, Escondido, San Diego, and Poway to the west, and the Cleveland National Forest (Henshaw District) to the north. The eastern boundary of Battalion 8 is Highway 78 x Hwy 79 crossing in Santa Isabel. The southern boundary is in Lakeside at Slaughterhouse Canyon Rd X Hwy 67. To the west, is the San Pasqual area near the San Diego Wild Animal Park X Hwy 78. The Battalion is approximately 233,841 acres or 365 square miles.

FUELS SUMMARY

The following is a fuels summary list:

- Predominately moderate chaparral and coastal sage
- Some standing dead oak trees due to insect infestation
- Persistent drought has hindered fuel recovery from areas burned during 2007 fires to the north and 2003 fires to the south

FIRE BEHAVIOR SUMMARY

The San Diego River Canyon has a bad history as a deadly fire corridor. During Red Flag Warnings with high Santa Ana east wind conditions, fires may burn with extreme fire behavior: long flame lengths, high rates of spread and energy outputs, and long-range spotting. The topography of drainages and canyons forms a passage for northeast wind driven fires from the Santa Ysabel area to align with slopes and typically moves into this area at a very high rate of spread. There was substantial structure loss throughout Ramona during the Cedar fire in 2003.

BATTALION PREFIRE GOALS

The following objectives have been developed based on stakeholder input and are intended to facilitate multi-agency cooperation for fire protection planning efforts in San Diego County:

FOSTER FIRE PREVENTION AND SAFETY THROUGH COMMUNITY EDUCATION AND TRAINING.

- Ensure effective communication and coordination with the Unit Communication Bureau
- Provide fire preparedness programs to students K-12
- Participate in Public Events to further community education
- Continue Ready Set Go and Why 100 education program

PROMOTE STRUCTURAL HARDENING AND DEFENSIBLE SPACE TECHNIQUES TO IMPROVE STRUCTURE SURVIVABILITY.

- PRC 4291 Inspections – Battalion goal of 3,300 inspections
- Engineering and structural ignitability education and information
- Ensure accurate collection of LE-100 data, utilizing the departments issued electronic platform
- Identify funding sources and opportunities for enforcement of regulations

ESTABLISH STRATEGIC FUEL BREAKS AND REDUCED FUEL ZONES TO IMPROVE COMMUNITY DEFENSE.

- Regularly inspect Foster, Mount Woodson, Iron Mountain, and Kimball Truck Trails to ensure back country access roads are maintained and brushed to support wildland fire access
- Implement vegetation management treatments and ignition reduction projects in priority WUI areas: Ramona, Mussey Grade

MAINTAIN DEPENDABLE INGRESS AND EGRESS ROUTES.

- Maintain evacuation corridors utilizing the P.A.C.E. concept (Primary, Alternate, Contingency, and Emergency)
- 20-foot Roadway Clearance: Boulder Creek Road
- Provide Wildland interface preparation training
- Work with Fire Safe Councils on CWPP and community education programs

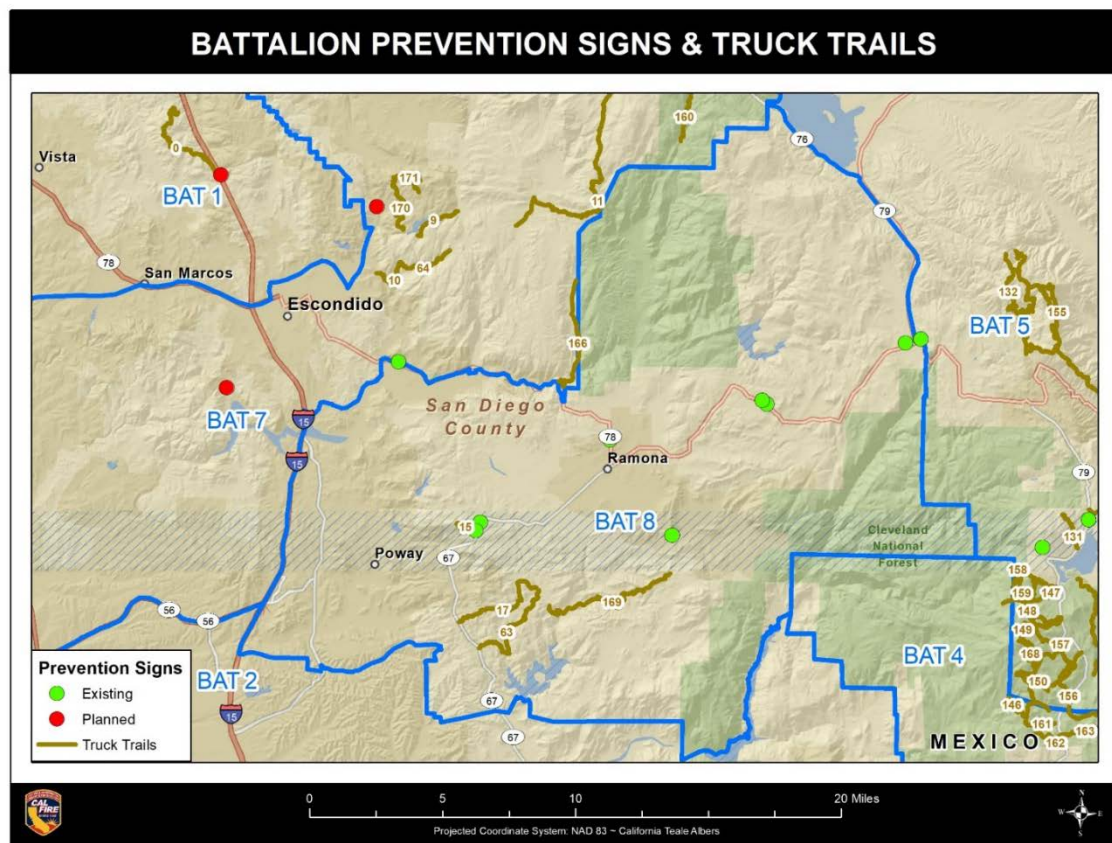
STRATEGIC FUEL BREAKS AND PRIORITY PREFIRE MAINTENANCE PROJECTS

Fuel Breaks			
Battalion	Project Name	Type	Acres Treated
8	Tulloch Ranch VMP	Rx Burn	909
8	SRA Ramona West End Fuel Reduction	Fuel Reduction	54
8	Moretti Ranch VMP	Rx Burn	284
8	Mt. Woodson Road / Repeater Fuel Reduction	Fuel Reduction	9
8	San Diego County Country Estates	Fuel Reduction	95

Truck Trails			
Battalion	Map Labels	Truck Trails	Length in Miles
8	63	Foster	4.98
8	15	Mount Woodson	1.66
8	17	Iron Mountain	4.65
8	169	Kimball	7.00

Prevention Signs			
Battalion	Maintenance	Sign Location	Status
8	Station 86	Highway 78 X Cedar Street	Existing
8	Station 86	San Vicente Road X Serra Way	Existing
8	Station 87	Highway 78 X Highway 79	Existing
8	Station 85	Highway 78 X Rancho Santa Teresa Drive	Existing
8	Station 85	Highway 78 X Casner Road	Existing
8	Station 86	Highway 67 X Rockhouse Road	Existing
8	Station 86	Highway 67 X Mount Woodson Road	Existing
8	Station 87	Old Julian Highway X Wood Hill Lane	Planned

Fire Safe Councils		
Battalion	Fire Safe Councils	Status
8	Ramona West	Active



APPENDIX A—CURRENT PROJECTS & ACTIVITIES

The Unit's Pre-Fire/Resource Management Projects and Activities are directly linked to specific Unit Goal and Objectives. These projects and activities are related to fuel modification, community outreach and education programs, etc.

Battalion	Project Name	Status	Type	Acres	Year
1	Welkview Fuel Break	Planned	Fuel Reduction	64	2023
1	Roblar Truck Trail	Planned	Fuel Reduction	9	2023
1	Rainbow Truck Trail	Planned	Fuel Reduction	9	2023
2	Alpine Community Defense	Active	Fuel Break	65	2022
2	Crest Community Fuel Break	Complete	Fuel Break	158	2023
2	Skeleton Flats Truck Trail	Planned	Fuel Reduction	9	2023
3	Lucky Six Fuel Break	Planned	Fuel Break	68	2023
3	Round Potrero Fuel Break	Active	Fuel Reduction	76	2022
4	McCain Valley Rx Fire Training	Active	Rx Burn	200	2022
4	Corte Madera VMP	Active	Rx Burn	219	2022
4	Cameron Extension Fuel Break	Planned	Fuel Break	11	2022
4	Tule Jim Lane Fuel Break	Planned	Fuel Break	39	2022
4	Campo VMP	Planned	Rx Burn	600	2023
5	La Cima Roadside Brushing	Active	Fuel Reduction	20	2022
5	Sunrise Fuel Break	Active	Fuel Break	47	2022
5	Cuyamaca Peak Rx Burn	Active	Rx Burn	86	2023
5	Warner Springs Estates Fuel Break	Planned	Fuel Break	26	2023
7	Palomar Mountain Forest Health Grant	Active	Fuel Reduction	2000	2022
7	La Jolla Truck Trail Fuel Reduction	Planned	Fuel Reduction	82	2022
7	Palomar Divide Fuel Break	Planned	Fuel Break	34	2022
8	San Diego Country Estates	Active	Fuel Reduction	95	2022
8	Moretti Ranch VMP	Active	Rx Burn	284	2022
8	Tulloch Ranch VMP	Active	Rx Burn	909	2022

APPENDIX B—COMPLETED PROJECTS AND ACTIVITIES

Below is a list of completed fuels management projects in support of the overall strategic fire plan goals.

Battalion	Project Name	Status	Type	Acres Treated	Year
1	Moosa Fuel Break	Complete	Fuel Break	86	2022
1	Welkview Fuel Break	Complete	Fuel Reduction	64	2020
1	Tenaja Truck Trail	Complete	Fuel Reduction	13	2019
1	Rainbow Truck Trail	Complete	Fuel Reduction	9	2019
1	Roblar Truck Trail	Complete	Fuel Reduction	9	2018
2	Crest Community Fuel Break	Complete	Fuel Break	158	2019
2	Sycuan Truck Trail	Complete	Fuel Reduction	13	2016
2	Suncrest Truck Trail	Complete	Fuel Reduction	4	2021
2	Valley View Truck Trail	Complete	Fuel Reduction	21	2021
3	Honey Springs Truck Trail	Complete	Fuel Reduction	17	2021
3	Wisecarver Truck Fuel Break	Complete	Fuel Break	33	2020
3	Daley Truck Trail	Complete	Fuel Reduction	21	2019
3	Wisecarver Truck Trail	Complete	Fuel Reduction	4	2019
3	Lyons-Lawson Truck Trail	Complete	Fuel Reduction	9	2019
3	Barrett Truck Trail	Complete	Fuel Reduction	38	2015
4	Tierra Del Sol Fuel Break	Complete	Fuel Break	89	2022
4	Calexico Lodge Fuel Reduction	Complete	Fuel Reduction	14	2021
4	Lake Morena Fuel Break	Complete	Fuel Break	35	2020
4	Campo Hills Fuel Break	Complete	Fuel Break	7	2020
4	Pine Valley Community Fuel Break	Complete	Fuel Break	23	2020
4	Campo/Camp Locket Fuel Break	Complete	Fuel Break	24	2020
4	Guatay Community Fuel Break	Complete	Fuel Break	72	2018
4	SRA – DDD County Tree Removal	Complete	Fuel Reduction	N/A	2016
5	Puerta La Cruz Truck Trail	Complete	Road	6	2021

5	Cooper Cienega Truck Trail	Complete	Road	6	2021
5	Rodriguez Truck Trail	Complete	Road	14	2021
5	Charriott Mountain Truck Trail	Complete	Road	13	2021
5	Beauty Mountain (East) Truck Trail	Complete	Road	28	2021
5	BSA Camp Mataguay Fuel Reduction	Complete	Fuel Reduction	59	2020
5	SRA - Cuyamaca Woods Roadside Hazardous Fuel Reduction	Complete	Fuel Reduction	10	2017
5	Cuyamaca State Park Lookout Road	Complete	Fuel Reduction	20	2017
5	Camp Winacka Fuel Break	Complete	Fuel Reduction	42	2017
5	SRA Cuyamaca State Park Fuel Reduction Phase II	Complete	Fuel Reduction	10	2016
5	SRA Cuyamaca Woods Fuel Reduction	Complete	Fuel Reduction	10	2016
5	Cuyamaca State Park Prescribed Burn Support	Complete	Rx Burn	80	2016
5	SRA Cuyamaca State Park Fuel Reduction Phase I	Complete	Fuel Reduction	8	2015
5	SRA Harrison Park Fuel Reduction	Complete	Fuel Reduction	12	2015
5	William Hiese/Volcan Mt. Preserve	Complete	Fuel Reduction	33	2014
6	SRA - San Diego Backcountry Fuel Reduction	Complete	Fuel Reduction	11	2017
7	Ridge Ranch Truck Trail	Complete	Fuel Reduction	9	2021
7	Von Sagren Truck Trail	Complete	Fuel Reduction	13	2021
7	Rancho Santa Fe Fuel Reduction	Complete	Fuel Reduction	15	2020
7	Doane Valley Rx Burn	Complete	Rx Burn	100	2018
7	Lusardi Truck Trail	Complete	Fuel Reduction	17	2018
7	Orosco Truck Trail	Complete	Fuel Reduction	13	2017
7	SRA - Palomar Divide Fuel Break	Complete	Fuel Break	34	2017
8	Mt. Woodson Road / Repeater Fuel Reduction	Complete	Fuel Reduction	9	2020
8	SRA Ramona West End Fuel Reduction	Complete	Fuel Reduction	54	2019
8	Foster Truck Trail	Complete	Fuel Reduction	17	2016
8	SRA - Ramona Community DDD Tree Removal Project	Complete	Fuel Reduction	N/A	2016
4, 5	Remote Watertank Maintenance Project	Complete	Water Tank Maintenance	N/A	2016
All	One Less Spark Media Campaign	Complete	Media Outreach/PSA	N/A	2015

APPENDIX C—GRANT PROJECTS AND ACTIVITIES

Through the California Climate Investments (CCI) Fire Prevention Grant Program, CAL FIRE aims to reduce the risk of wildland fires to habitable structures and communities, while maximizing carbon sequestration in healthy wildland habitat and minimizing the uncontrolled release of emissions emitted by wildfires. Below is a list of grants awarded to local cooperators to date in chronological order.

Battalion	Project Name	Deliverable	Grant Amount	Grantee	Fiscal Year Grant Awarded
4	Dead, Dying and Diseased Tree Removal - Descanso	N/A	\$450,000	San Diego County	2014/2015
1	Deer Springs Community Fuels Reduction and Chipping Project	Chipping	\$29,610	Deer Springs Fire Safe Council	2014/2015
7	SRA Greater Valley Center Community Chipping Days	Chipping	\$50,000	Greater Valley Center Fire Safe Council	2014/2015
7	Woods Valley and Paradise Mountain Rd Fuel Reduction Project	32 AC	\$130,000	Greater Valley Center Fire Safe Council	2014/2015
7	SRA Greater Valley Center Eden and Hidden Valley	24 AC	\$8,000	Greater Valley Center Fire Safe Council	2014/2015
7	Palomar Mountain Community Chipping Days	Chipping	\$6,900	Palomar Mountain Volunteer Fire Department	2014/2015
7	Palomar Divide SRA Fuel Break	36 AC	\$25,605	Palomar Mountain Volunteer Fire Department	2014/2015
8	Ramona Dead and Dying Hazardous Tree Removal	N/A	\$64,799	Ramona West End Fire Safe Council	2015/2016
5	Cuyamaca Woods Roadside Hazardous Fuels Reduction	17 AC	\$49,500	Cuyamaca Woods Fire Safe Council	2015/2016
2	San Diego Back Country Fuel Reduction Project	39 AC	\$93,855	Urban Corps of San Diego County	2015/2016
7	Valley Center Community Chipping Days	Chipping	\$74,000	Greater Valley Center Fire Safe Council	2016/2017
5	Julian Community Fire Fuel Reduction Project	26 AC	\$53,612	Urban Corps of San Diego County	2016/2017
8	Ramona Dead and Dying Hazardous Tree Removal - 2	N/A	\$65,099	Ramona West End Fire Safe Council	2016/2017
5	Sunrise Fuel Break	51 AC	\$107,425	Fire Safe Council of San Diego County	2016/2017
7	Valley Center Community Chipping Days	Chipping	\$164,124	Greater Valley Center Fire Safe Council	2017/2018
7	Valley Center Community Wildfire Education	N/A	\$31,180	Greater Valley Center Fire Safe Council	2017/2018
7	Valley Center Community Evacuation Route Fuels Reduction	TBD	\$162,185	Greater Valley Center Fire Safe Council	2017/2018

Battalion	Project Name	Deliverable	Grant Amount	Grantee	Fiscal Year Grant Awarded
1	Deer Springs Community Hazardous Fuels Reduction and Education Project	TBD	\$93,230	Deer Springs Fire Safe Council	2017/2018
2	San Diego Right of Way Clearance	58 AC	\$106,761	Urban Corps of San Diego County	2017/2018
8	Ramona Dead and Dying Hazardous Tree Removal - 3	N/A	\$67,100	Ramona West End Fire Safe Council	2018/2019
7	Greater Valley Center Community Wildfire Protection Planning	N/A	\$64,780	Greater Valley Center Fire Safe Council	2018/2019
8	PNEC Fire Safety & Prevention Educational Outreach Program	N/A	\$24,608	Poway Neighborhood Emergency Corps	2018/2019
7	Palomar Mountain Fire Break & Evacuation Project	10 AC	\$169,520	Palomar Mountain Fire Safe Council	2019/2020
7	Saving San Diego's Last Mixed Conifer Forest (Forest Health Grant)	2000 AC	\$4,994,531	Fire Safe Council of San Diego County	2019/2020
TBD	Reducing Fuels and Increasing Evacuation Readiness in San Diego County	TBD	\$5,221,043	San Diego County Fire	2020/2021
7	Pala Fire Prevention Fuels Project	158 AC	\$401,678	Pala Band of Mission Indians	2020/2021
TBD	Caltrans Integrated Vegetation Management	39.5 AC	\$181,539	Urban Corps of San Diego County	2020/2021
7	Deer Springs Community Chipping Program	Chipping	\$24,800	Deer Springs Fire Safe Council	2020/2021
Total			\$12,915,484.00		

EXHIBITS: MAPS

The following list of maps provides the background information regarding the geographical layout of the San Diego Unit:

MAP 1: SAN DIEGO UNIT OVERVIEW MAP

MAP 2: SAN DIEGO UNIT LAND OWNERSHIP

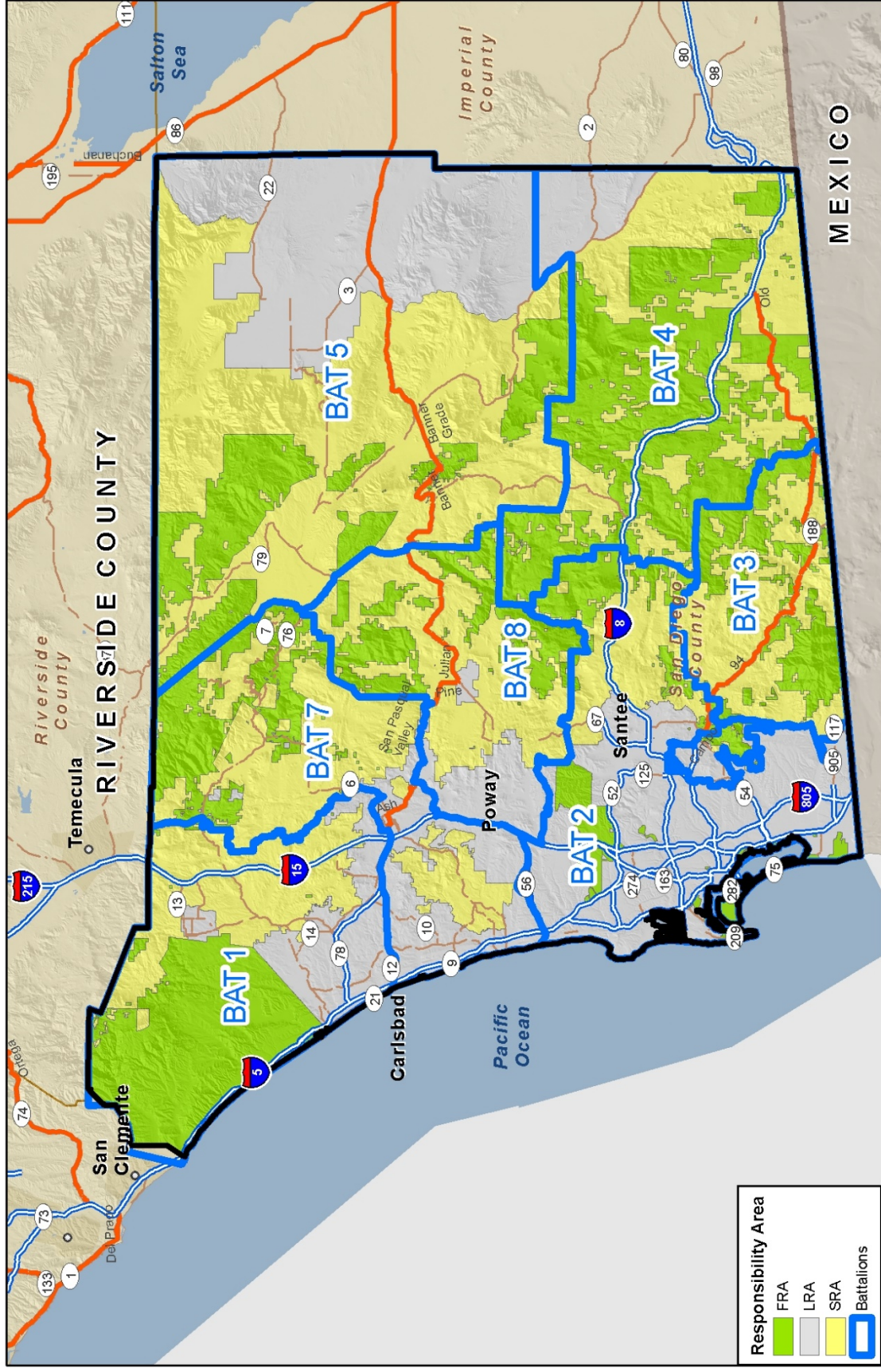
MAP 3: SAN DIEGO UNIT FIRE HAZARD SEVERITY ZONES

MAP 4: SAN DIEGO UNIT DIRECT PROTECTION AREAS

MAP 5: SAN DIEGO COUNTY CWPP MAP

MAP 6: SAN DIEGO COUNTY FIRE SAFE COUNCIL BOUNDARY MAP

~ SAN DIEGO UNIT OVERVIEW MAP ~



80 Miles

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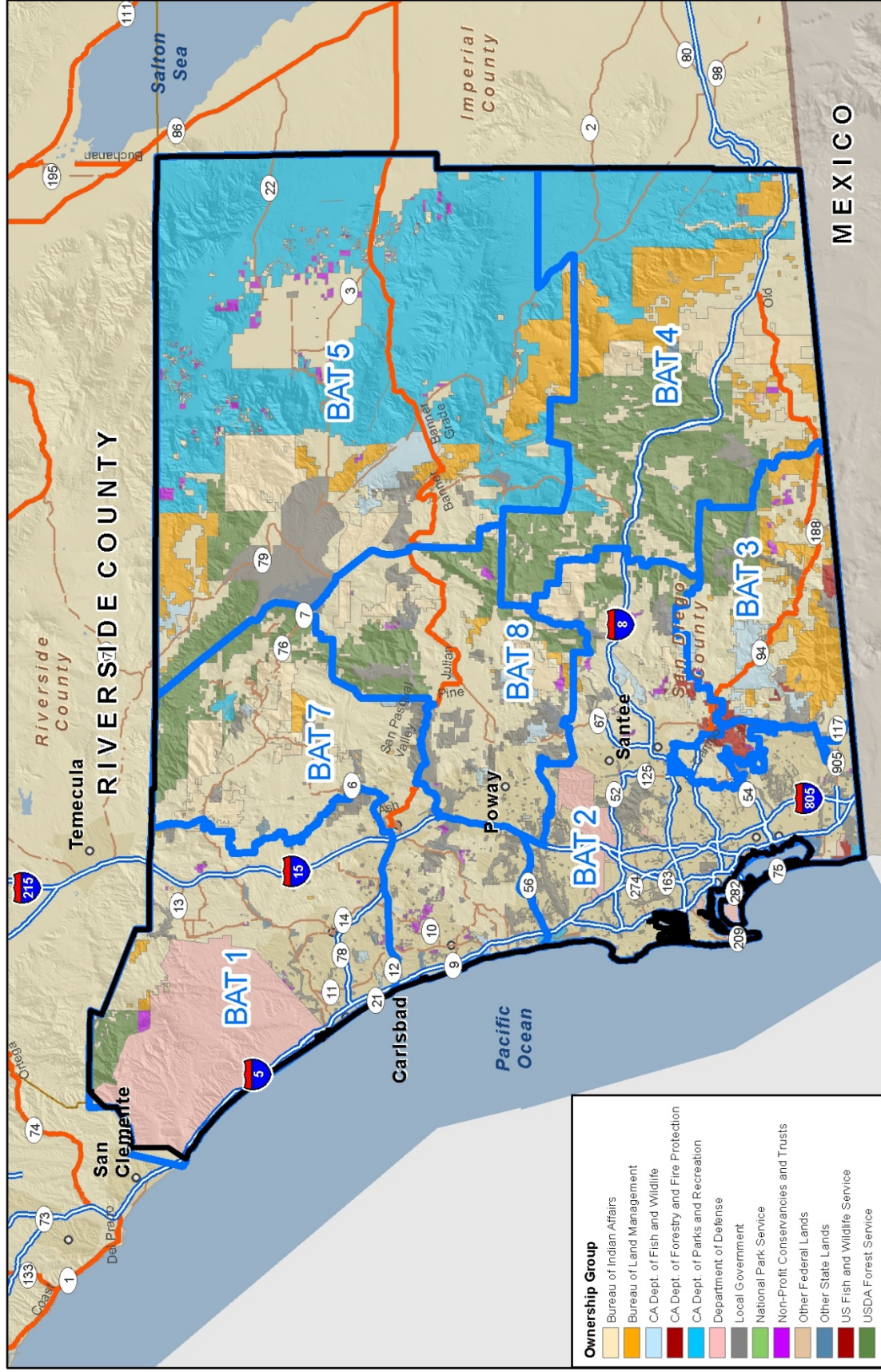
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Projected Coordinate System: NAD 83 ~ California Teale Albers



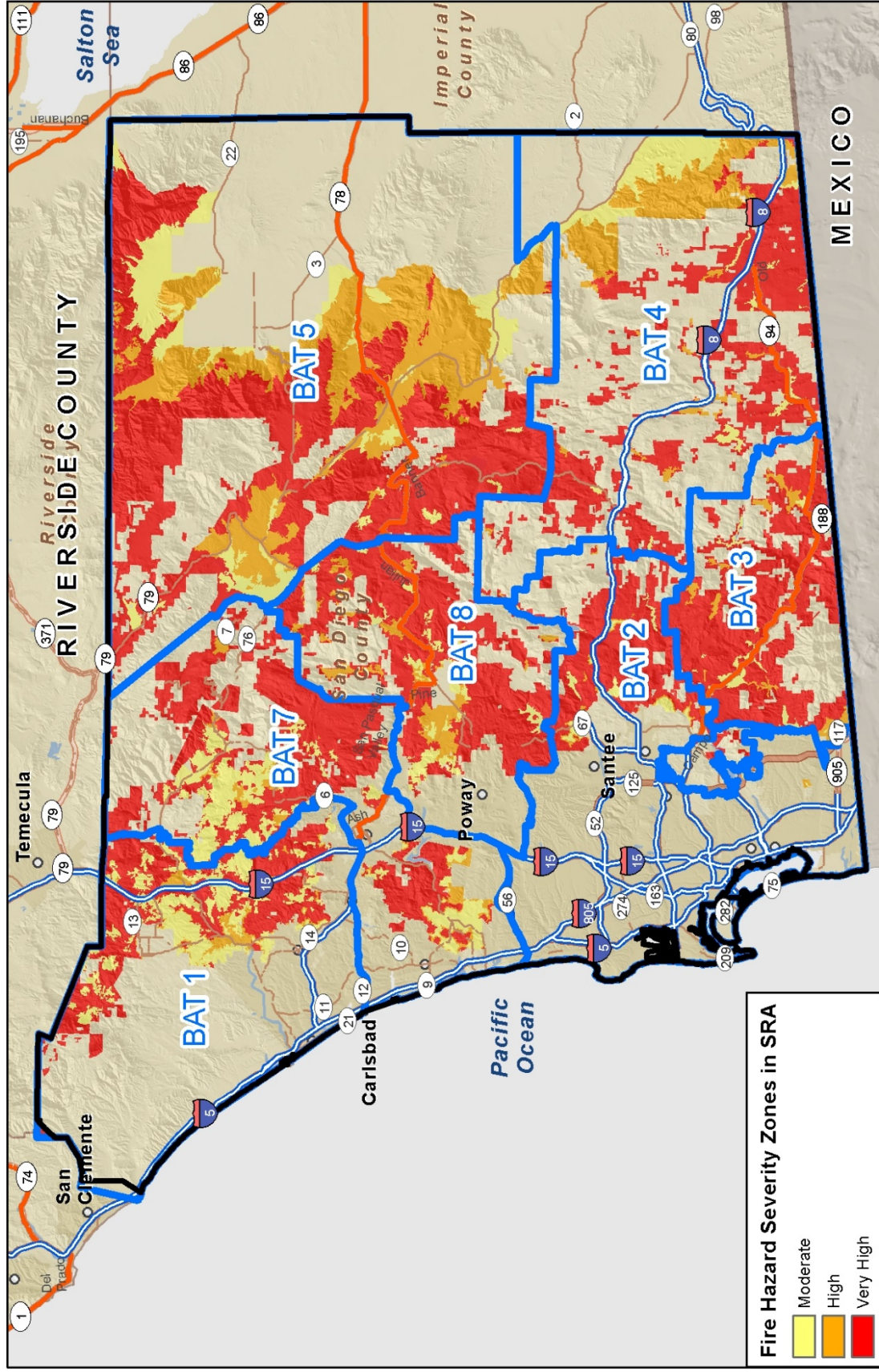
~ SAN DIEGO UNIT LAND OWNERSHIP ~



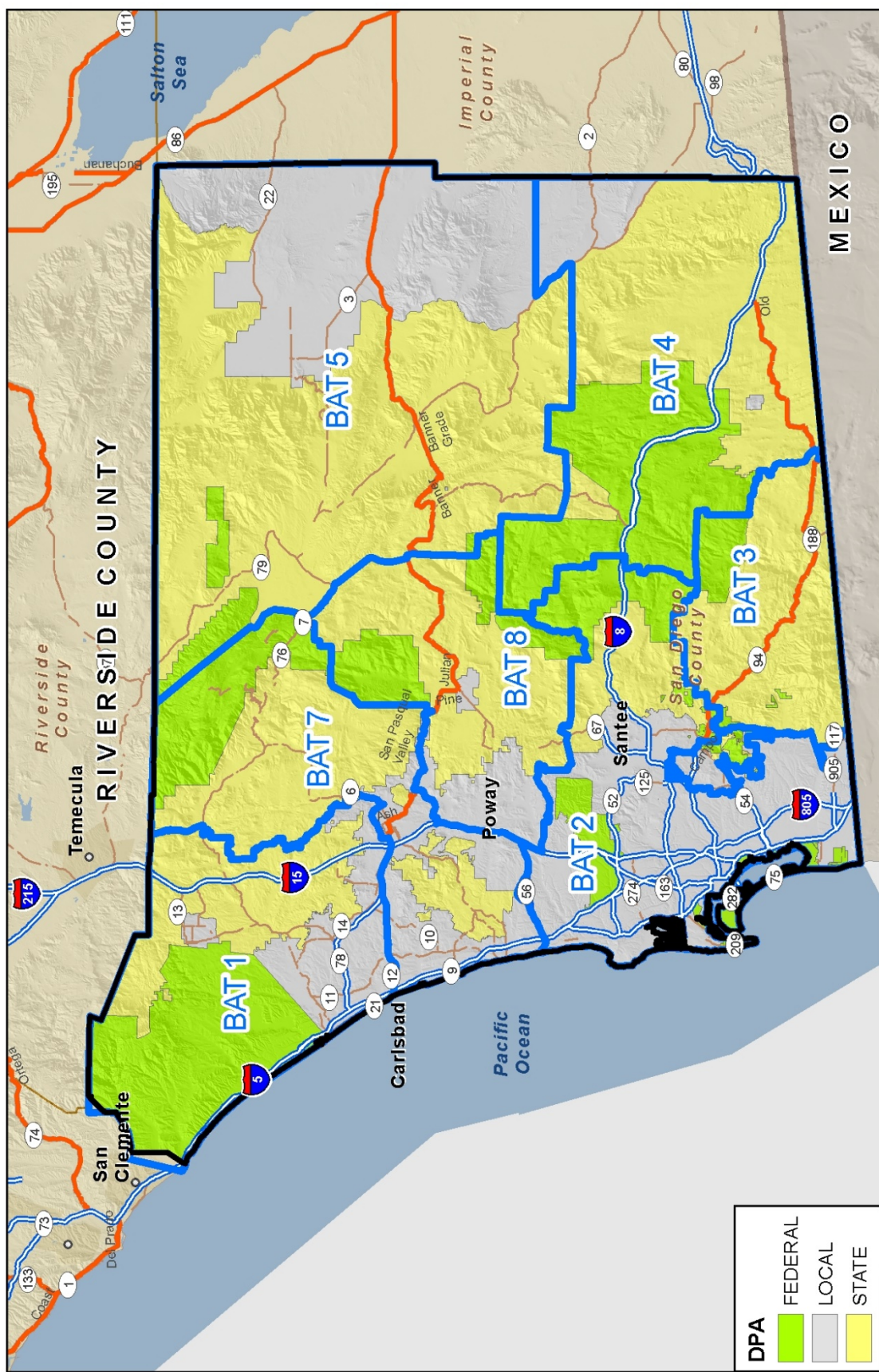
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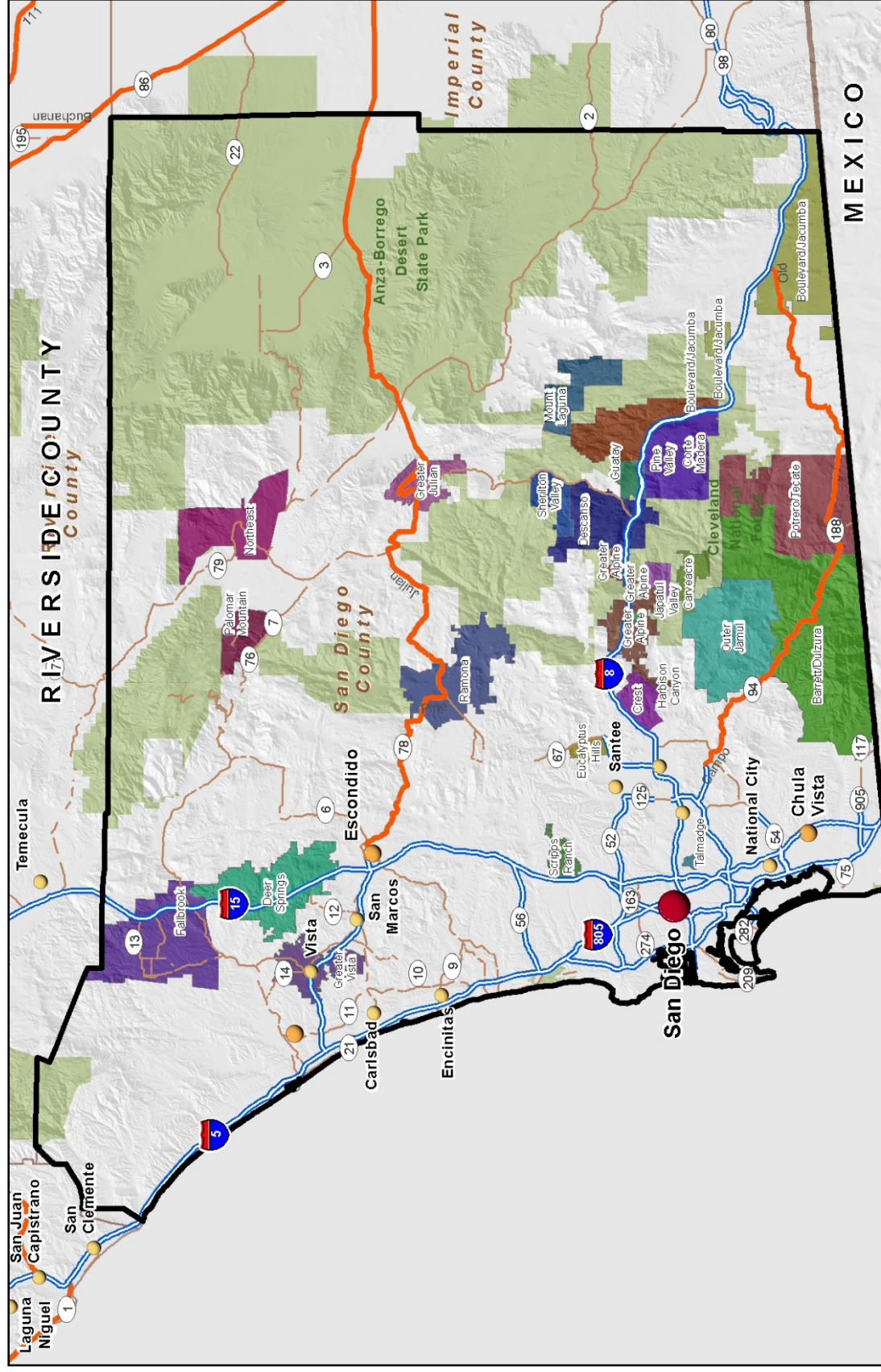
~ SAN DIEGO UNIT FIRE HAZARD SEVERITY ZONES ~



~ SAN DIEGO UNIT - DIRECT PROTECTION AREAS ~



~ SAN DIEGO UNIT - CWPPs ~



~ SAN DIEGO UNIT - FIRESAFE COUNCILS ~

